Chapter-4

China’s Arms Supplies to Pakistan: The Nuclear and Missile Issues
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There is an asymmetry between Pakistan, India and China – India vis-à-vis China and Pakistan vis-à-vis India in conventional and nuclear weaponry.¹

Introduction

China-Pakistan strategic ties in the field of missile and nuclear technology represents a unique bond in their relationship. Not only components, design and technology where assisted to Pakistan, but combat ready weapons itself were transferred. Interestingly, such transfers took place even when China adhered to arms control agreements. It is stated that almost 70 per cent of Pakistan's conventional armament is of People's Republic of China (PRC) design and almost 90 per cent of its missile production is based on Chinese aid.² Similarly, in the field of nuclear technology, China provided most of the know-how and equipment. Therefore, the main focus of this chapter is to look into the genesis and as well as the ongoing strategic cooperation between China and Pakistan in the field of missiles and nuclear issues.

Background: China's Missiles Assistance to Pakistan

China's missiles assistance to Pakistan can be looked upon both in terms of strategic and commercial. Strategically, since 1947, Pakistan relied heavily on aircraft to fulfill its objectives.³ This was gradually followed by missiles programme and development. However, in commercial terms, their relationship is limited. To begin with, China and Pakistan have enjoyed a close strategic relationship since 1960s.⁴ The history of Pakistani missile development can be traced back to the formation of the "Space and

Upper Atmosphere Research Commission" set up in 1961.\(^5\) Initially, the commission worked for indigenous development of missiles.\(^6\) It was also at this period of time that China’s strategic missile launching brigade “The 2nd Artillery Corps of China” established in 1960, successfully launched China’s first missile.\(^7\)

And in 1970s initiative for setting up an industry for ground to air missiles got momentum, especially during Pakistan’s General Tikka Khan’s visit to Beijing in January 1978.\(^8\) This was followed by M-11 missile in the 1980s. Report indicates that the contract for M-11 (surface-to-surface missiles with a range of 105 km\(^9\)) was signed in 1988.\(^10\) Also during this period Pakistan’s missile systems “Hatf programme” surfaced out. With Chinese co-operation Pakistan tested its first Haft-1 (80 km) missile in April 1988 and also tested Haft-2 (300 km) in the same year.\(^11\) This became clear when in February 1989 General Aslam Beg announced that “two versions of the Hatf had been successfully tested.”\(^12\)

In 1990s, China began to transfer much sophisticated missile to Pakistan. During 1990-92, China provided Pakistan with nuclear capable M-11 [DF-11] missiles with a range of 186 miles and also the technology to build a missile that could strike targets within a 360 mile range.\(^13\) Besides this, joint collaboration in exchange of technology information and training of personnel for remote sensing and telecommunications was initiated between the two in 1991.\(^14\) In the same year, on April, the United States announced that China had transferred M-11 (Hatf-3) missiles and other missile

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\(^6\) Ibid.


technology components/sub-assemblies from China and North Korea to Pakistan.\textsuperscript{15} This was followed by again transferring of 34 complete M-11 missile system to Pakistan (in apparent violation of its earlier 1991 pledge) in December 1992.\textsuperscript{16} In Pakistan, the Chinese M-11 missile was transformed into Shaheen programme. The Shaheen-1 with a range of 500 kilometers was tested in 1999.\textsuperscript{17} Similarly, Pakistan developed Shaheen-2 having range of 2,500 km.\textsuperscript{18} Ostensibly, leaving aside Pakistan, for China the exports of its nuclear and missile related items are a major source of foreign exchange as well as a means of gaining influence in these regions.\textsuperscript{19}

**Scope of Activities: Chinese Missile Assistance to Pakistan**

China remains the main source of supplier for Pakistan’s missile programme. This is because China still continues to provide guidance systems and technical expertise to develop long-range ballistic missiles to Pakistan.\textsuperscript{20} In the late 1980s and 1990s, the transfer of M-11 issue was a major international issue. Credible evidence indicates that in spite of the restrictive nature followed by arms control regime, China, in fact transferred the missile.\textsuperscript{21} This led the U.S. to impose sanctions on China.\textsuperscript{22} Pertaining to the M-11 missile, Zamir Khan, a political counsellor in the Pakistani embassy has been quoted as saying that “The procurement of M-11 missiles was hardly a secret.”\textsuperscript{23}

Ostensibly, in May 1991, China confirmed to Robert M. Kimmit, the U.S. Undersecretary of State, that it had sold ballistic missiles to Pakistan.\textsuperscript{24} Similarly, a spokesperson for the Chinese Foreign Ministry, Wu Jianmin, admitted on June 20, 1991,


\textsuperscript{16} Testimony of Dr. Gordon Oehler, Hearing on the Proliferation of Chinese Missiles, Senate Foreign Relations Committee, US Senate, 11 June 1998, as given in “China’s Missile Exports and Assistance to Pakistan”, as given in http://www.nti.org/db/china/mpakpos.htm


\textsuperscript{18} Ibid.

\textsuperscript{19} R. Jeffrey Smith, n. 10.


\textsuperscript{22} “China’s Missile Exports and Assistance to Pakistan” Center for Non-proliferation Studies, Monterey Institute of International Studies, July 1999, available at http://cns.miis.edu/research/India/china/mpakpos.htm


that a small number of short-range missiles had been transferred to Pakistan.\textsuperscript{25} It did not end here, once again on July 5, 1991, in an open letter to the editors of the \textit{Washington Times}, the press counsellor of the Chinese embassy, Chen Guoqing, said that “China had sent very small quantities of short-range tactical missiles to Pakistan.”\textsuperscript{26} Similarly, the then President of Pakistan, Farooq Leghari, officially confirmed in 1994, that “Pakistan had purchased missiles from China.”\textsuperscript{27}

\textbf{M-11 Missile & M-9 Missile}

Pakistan entered into contract with China for the supply of 36 M-11s, and as well as for the construction of a factory to produce missiles in 1980s.\textsuperscript{28} Since then the first sale of 84 M-11 missiles with 12 to 20 launchers were reported in 1988.\textsuperscript{29} Besides this, it is stated that the Chinese have transferred five thousand ring magnets to an unsafeguarded nuclear facility in Pakistan.\textsuperscript{30} Besides this, “Chinese technicians have been seen for production of China assisted missiles including M-11, rocket motors, propellants and guidance system at the ballistic missile production plant in Kalachata mountain range near Fatejung near Islamabad called the National Defence Complex.”\textsuperscript{31}

In January 1992, China transferred guidance systems for M-11 missiles to Pakistan.\textsuperscript{32} This was followed with the transfer of 34 M-11 missiles in November 1992.\textsuperscript{33} Sources indicate that “China transferred the training version of M-11 to Pakistan.”\textsuperscript{34} The training version of M-11 was accompanied with a transports-erator-launcher vehicle.\textsuperscript{35}

\textsuperscript{27} \textit{Reuters}, December 5, 1994, as cited in http://www.nti.org/e_research/profiles/Pakistan/Missile/index_3066.html.
\textsuperscript{28} Andrew Koch, “Pakistan Persists with Nuclear Disarmament”, \textit{Jane’s Intelligence Review}, March 1997, pp. 131-133.
\textsuperscript{32} \textit{The Asian Age}, New Delhi, August 27, 1996, p. 17.
\textsuperscript{33} R. Jeffrey Smith, n.lO.
\textsuperscript{34} Gordon Jacobs and Tim McCarthy, n.29, p. 560.
\textsuperscript{35} Ibid.
Pakistan’s Army Chief, Mirza Aslam Beg, stated in 1993, that “the M-11 could be the best carrier for Pakistani weapons.” Besides this, it is stated that Chinese missile technicians visited Pakistan M-11 sites in 1994. This was again followed by Chinese technicians training of Pakistani M-11 Army units in 1995.

Thus, the period between 1996 and 1997, the Chinese provided assistance to Pakistan for the indigenous production of M-11 missile. Similarly, in 1996, China assisted Pakistan navigation equipment such as gyroscopes and accelerometers. According to the National Intelligence Council (NIC) report of September 1999, China had supplied M-11 short-range ballistic missiles to Pakistan. Besides this, On September 1999, CIA report on foreign ballistic missile threats to the United States stated that Pakistan not only acquired the components or technology, but the M-11 missiles themselves from China.

China also transferred M-9 missile. The M-9 missile is a surface-to-surface missile with a range of 600 km. This short tactical ballistic missile is about 9 meters long, weighs about 6-tons, uses solid fuel and can carry one nuclear warhead. Both M-9 and M-11 is a tactical ground-to-ground battlefield support missiles mounted on a vehicle that can change its launch position at anytime. Apart from M-9 and M-11 ballistic

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40 Ibid.
41 R. Jeffrey Smith, n.10.
missiles, China also assisted Pakistan with Hj-8 anti-tank missiles and HN-5A portable SAMs. 47 Similarly, in 21st century, reports indicate that the transfer for guidance took place again in 2000 and 2002. 48 Not only these, China continues to provide blueprints and construction equipment for the missile factory in Rawalpindi for manufacture of missiles. 49

**Pakistan's Missile Programme Chronology**

Table - 1 given below shows the chronology of Pakistan’s missile programme along with their particulars and characteristics. The table shows the particulars starting from the setting up of Pakistan’s Space and Upper Atmosphere Research Commission (SUPARCO) in 1961, right up to 2002 involving Haft type of missiles.

**Table - 1 Detailed Chronology of Pakistani Missile Programme**

<table>
<thead>
<tr>
<th>Year</th>
<th>Particulars</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>Pakistan’s Space and Upper Atmosphere Research Commission (SUPARCO) is created to oversee all space research and development programmes</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>SUPARCO begins launching imported sounding rockets from a test range near the Indian Ocean.</td>
<td></td>
</tr>
<tr>
<td>1970</td>
<td>SUPARCO develops the capability to fabricate rocket motors from raw materials. It has a solid-fuel manufacturing plant and maintains an instrument development facility and a rocket testing range</td>
<td>The Hatf-1 has an estimated range of 80km and 500kg payload. The Hatf-2 has an estimated range of 300km and a 500kg payload</td>
</tr>
<tr>
<td>1980</td>
<td>Pakistan's surface-to-surface ballistic missile programme begins in the early 1980s with development of the Hatf-1 and Hatf-2.</td>
<td></td>
</tr>
<tr>
<td>1982</td>
<td>SUPARCO’s chairman, Dr. Salim Mehmud, says that his organization lacks skilled technical specialists, and that space technology-related training facilities are non-existent. He also</td>
<td></td>
</tr>
</tbody>
</table>


complains about financial limitations on the space program and that development is stymied by a limited industrial infrastructure.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1987</td>
<td>Pakistan opens a rocket propellant factory.</td>
</tr>
<tr>
<td>1989</td>
<td>In April, tests of the Hatf-1 and Hatf-2 are announced. Pakistan says it produced both missiles indigenously but Western sources suspect it received technical assistance from China. The Hatf-2 is displayed publicly for the first time during a Pakistan Day Joint Services Parade. The missile was mounted on a mobile launcher converted from a British anti-aircraft gun carriage.</td>
</tr>
<tr>
<td>1992</td>
<td>An improved variant, the Hatf-1A, China may have sold more than 30 ballistic missiles to Pakistan, including the M-11</td>
</tr>
<tr>
<td>1996</td>
<td>The Hatf-2 is declared operational</td>
</tr>
<tr>
<td>1997</td>
<td>Pakistan announces a test of the 800km Hatf-3 in July. In January, Pakistan announces development of the Ghauri ballistic missile.</td>
</tr>
<tr>
<td>1998</td>
<td>In April, a test-launch of the indigenously produced Ghauri is announced</td>
</tr>
<tr>
<td>1999</td>
<td>Pakistan test fires Ghauri II &amp; Shaheen missiles</td>
</tr>
<tr>
<td>1999</td>
<td>Pakistan test fires Ghauri II &amp; Shaheen missiles. Pakistan also fired improved version of Hatf-2. Also called Hatf-2A</td>
</tr>
<tr>
<td>2002</td>
<td>Pakistan conducted series of missiles test: Hatf-5 (Ghauri) was tested with dummy nuclear payload, followed by testing of Hatf-3 (Ghaznavi) and Hatf-2 (Abdali)</td>
</tr>
</tbody>
</table>

The Table – 2 below shows the missile systems, their characteristics and also the areas of reported assistance to Pakistan. The main purpose of highlighting this table is to familiarise with the different missile system reportedly assisted to Pakistan by China.

**Table – 2 Chinese Missile Assistance to Pakistan**

<table>
<thead>
<tr>
<th>Missile system</th>
<th>Characteristics</th>
<th>Areas of reported Chinese assistance to Pakistan</th>
</tr>
</thead>
</table>
| M-11/DF-11/CSS-7 (Reason for US sanctions against China in 1991 and 1993) | • Range: 300 km  
• Payload: 800 kg  
• Solid propellant  
• A few may be armed with nuclear warheads | Chinese transfer of M-11 test missile and launcher (1991)  
| Missile factory for manufacture of medium-range ballistic missiles, likely the M-11 or a similar missile | • Located in Rawalpindi  
• Unclear whether this facility will be able to manufacture complete missiles or only some major components | Continuing Chinese assistance, including blueprints and construction equipment (1996-1997) |
| Hatf-1/1A | • Range: 80 km (Hatf-1A: 100 km)  
• Payload: 500 kg  
• Single stage; solid propellant | Possibly developed with some Chinese assistance |
| Hatf-2 | • Range: 300 km  
• Payload: 500 kg  
• Two stage; solid propellant | Possibly developed with some Chinese assistance |
| Shaheen | • Range: 600 km  
• Payload: 500 kg | Possibly similar to China’s M-9 |
| Ammonium perchlorate | • Chemical used in rocket fuel | Alleged illegal Chinese shipment of 10 tons to Pakistan (1996) |
| Anza | • Surface-to-air missile (SAM) | Pakistani version of PRC-supplied SAM |
| Arms Materials | • Special metals and electronics used in the production of Chinese-design anti-tank missiles (Pakistan’s Baktar Shikhan is virtually identical to China’s Red Arrow 8 guided missile) | Alleged Chinese shipment to Pakistan (1998) |

**Source:** The source is taken from http://www.nti.org/db/chinalmpakpos.htm.
Pakistan’s on-going Missile Programmes

As mentioned above the history of Pakistani missile development started way back in 1961, when the “Space and Upper Atmosphere Research Commission” was set up. Since then, the programme continued to produce various missiles through Chinese assistance. However, it became more prominent only in the 1990s. For instance, the first major turning point took place in 1991, as China transferred M-11 (M-11/DF-11/CSS-7) test missile and launcher to Pakistan.\(^{50}\) And after a year in 1992, it has been reported that China transferred 34 complete M-11s to Pakistan.\(^{51}\) Thereafter, from 1992 to 1995, China’s assistance to Pakistan, although vested mainly on M-11 components and technology.\(^{52}\) Other China’s on going missiles assistance to Pakistan can be looked upon in the following categories:

**Anza and Baktar Shikan missile**

The programme to manufacture laser range finders and missiles such as the Chinese Red Arrow-8 and Swedish RBS-70 missile were launched in 1980s.\(^{53}\) Simultaneously, under Dr. Abdul Qadeer Khan, work began to manufacture indigenous Anza-II missile (shoulder fired anti-aircraft missile having the same specifications as the American Stinger missile) in Kahuta Research Laboratories (KRL) with Chinese assistance and help.\(^{54}\) This Anza Surface-to-air missile (SAM) is said to be supplied by PRC.\(^{55}\) Similarly, in 1990s, Baktar Shikan, Chinese design anti-tank missiles were allegedly shipped by China to Pakistan in 1998.\(^{56}\) Basically, Pakistan’s Anza and Baktar Shikan missile are said to be copies of Chinese SAM and Red Arrow missiles respectively.\(^{57}\)

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54 Ibid.
**Ghauri Missile**

Interesting fact about Pakistan's missile development is that, when the PAEC was looking towards China, A.Q. Khan is stated to have taken a different route and approached North Korea, his "Ghauri missiles" are said to be Pakistani assembled versions of North Korea's Nodong missiles.\(^5\) Even for Ghauri missile, China is said to have acted as a common link between Pakistan and North Korea.\(^5\) This is because Ghauri bears a striking resemblance to China's DF-21.\(^6\) Pakistan first test fired Ghauri-I on April 1998 and claimed that the missile could carry a warhead of 1,500 kilometres.\(^1\)

The test was said to be initially planned for March 1998, but was delayed by a month, as Washington urged visiting Pakistani Chief of Army Staff, General Jahingir Karamat not to flight-test the missile (Ghauri).\(^2\) Pakistan hailed the test and claimed that they had attained strategic parity with India.\(^3\) According to M.A. Naizi and Sireen M. Mazari, "the test-flight of Ghauri contributed to the minimal deterrence of Pakistan."\(^4\) Thus, for Pakistan the development of *Ghauri* a delivery missile system was to maintain balance of power.\(^5\)

Thereafter, Pakistan characteristically began to improve the Ghauri missiles. The first test of Ghauri-2, with a range of up to 2,000 km took place in April 1999, and similar plan for Ghauri-3 missile with a range of 3,000 km was carried out in Kahuta.\(^6\)

The *Ghauri* series Pakistan tested in 1998 and 1999 surface-to-surface missiles with a single-state liquid fueled vehicle range of 1500 to 2500 km and payload of 500 kg is said.

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61 Yang Jiemian, n.58, p. 206.


be an enhanced version of North Korean Nodong-II. Interestingly, even the Ghaznavi missile series with a range of 2000 km to 5000 km is based on North Korean Taep'o dong I & II. Nodong-I with a range of 1,000 km was first test-fired successfully by North-Korea in 1995. The inclusion of Ghauri, Shaheen and a series of S.S.M missiles involving solid and liquid fuel rocket motors technology added advantage to Pakistan’s missile programme.

**Shaheen Missiles**

China’s continued missile cooperation with Pakistan became more transparent as Pakistan tested “Shaheen-1” on April 1999. The missile (Shaheen) is reportedly modelled on Chinese M-9 missiles for which China has supplied with technology. In 2001, *Washington Times* quoted American intelligence officials as saying that “12 consignments for missile parts for Shaheen-I and Shaheen-II missiles had reached Pakistan either by Ship or by truck.” Shaheen is said to be similar to China’s M-9 missile.

**Haft Missiles**

The Haft (literally meaning “deadly” and is the name used for the sword of the Holy prophet) missile programme was said to began in 1974, when Zulfiqar Ali Bhutto was the Prime Minister of Pakistan. The father of Pakistan’s uranium enrichment programme and the “Ghauri missile” Abdul Qadir Khan, boasting its achievement said on January 1999, that:

> Pakistan’s missiles are far superior to what India had in its arsenal and New Delhi have to think twice before daring to attack Pakistan. Our missiles can hit any Indian city within 10 to 15 minutes at a speed of three kilometers per second...Pakistan’s missiles [are] far

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68 Ibid.
70 Ghulam Umer, n.65, p. 130.
71 R. Jeffrey Smith, n. 10.
75 Cameron Binkley, n.5.
76 The missile is named after Muslim invader, Mohammed Ghauri, who pillaged Indian cities in the eleventh century; particularly those within the jurisdiction of the Indian king Prithvi Raj Chauhan.
better than Prithvi and Agni they could not be neutralised or destroyed once they were launched.77

With Chinese assistance Pakistan tested Hatf-I and Hatf-II missiles.78 It is stated that Hatf-I with a range of 80 km and Hatf-II with a range of 300 km was test fired on February 5, 1989, in response to India’s missile and space technology programme.79 The then Chief of Army Staff of Pakistan, General Aslam Beg, announced that Hatf-1 was test fired a few months before the first test firing of India’s Agni.80 Hatf-1 was said to be based on French technology. Besides this, a report in 1992, also suggested that Pakistan had developed Hatf-1A, with a range of 100 km and payload of 500 kg.81

Pakistan’s most capable operational ballistic missile is the Hatf-II (also called Abdali) capable of carrying 500-kg payload to a range of 300 km.82 Some Western reports claimed that the missile is however shorter in range. For instance, a Carnegie Endowment study put the range to around 180 km with the payload of 500 kg.83 Whereas, the Federation of American Scientists (FAS) in its report put the range to around 280 km and payload capacity of 500 kg.84 According to the then Pakistan’s Chief of Army Staff, General Aslam Beg, China initially encouraged Pakistan to develop its own guidance system for the Hatf-II, although its standard was extremely poor.85 No doubt, the missiles Hatf-1 & Hatf-II developed with Chinese assistance had been fruitful to Pakistan.86

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77 “Pak claims nuclear superiority over India”, The Telegraph, Calcutta, 1 February 1999.
79 Ayesha Siddiqa-Agha, n. 53, p. 151.
It was widely believed that a long range ballistic missile tested by Pakistan on December 1990, was the Haft-III. The Haft-III is stated to be in the range of 600-800 km. After seven years, in 1997, Pakistan claimed that it had tested the Haft-III. The recent Ghaznavi missile programme is nothing but old Hatf-III missile. Similarly, in July 1997, it is believed that Hatf-IV with a range of 600-800 km was test fired and after two years in 1999, Haft-IV renamed as Shaheen-I was test fired.

Haft-V or Ghauri missile with a range of approximately 1500 km and a payload capacity of 700 kg was tested on April 6, 1998. Besides this, Ghauri-2 or Haft-VA with a range of 1600-1800 km and a payload capacity of 1500 kg was test fired on May 25, 2002. Report also surfaced out that test of Ghauri-3 missile with a range of 2000-2500 km and a payload capacity of about 1000 kg was test fired on March 9, 2004.

Pakistan successfully test fired long range surface-to-surface two stage ballistic missile Haft-VI (Shaheen-II) on March 9, 2004. The two-stage solid fuel missile with a range of 2,500 km and having a capability of mobile platform is said to bring entire India within its striking range. Prior to this, the earlier version Shaheen-I is said to have a range of 750 km. The Centre for Defence Information lists Haft-VI as Shaheen-2. Besides this, China also transferred missile command system- CT-101 to Pakistan. This CT-101 is required to increase better control and guidance for Ghauri-II and Shaheen-II missiles. (See Appendix -3 for Pakistan's missile programme chronology).

87 Duncan S. Lennox, n. 80, p. 179.
89 The Indian Express, New Delhi, July 3, 1997.
92 The Indian Express, New Delhi, April 7, 1998.
96 Ibid
97 NTI, Pakistan Missile Overview, http://www.nti.org/e_research/profiles/Pakistan/Missile/index_3066.html
98 NTI, Pakistan: Missile Import/Export, http://www.nti.org/e_research/profiles/pakistan/Missile3297_3299.html
99 Ibid.
Miscellaneous

The Chinese entities continued to work with Pakistan in the production of missiles domestically in Pakistan. For instance, China helped Pakistan to domestically produce solid-propellant SRBMs and supported Pakistan's development of solid-propellant MRBMs as well. A general comparison of Pakistan’s missile system during the Cold War period with that of post-Cold War era shows that Pakistan gained tremendously due to Chinese assistance. The sophistication of Pakistani missile systems is clearly projected by Raja Zafarul Haq, the leader of the House of Senate and the Minister of Religious Affairs, informed the Pakistani Parliament on June 10, 1998, that “Pakistani missiles had been mounted with nuclear warheads.” It stated that China even helped Pakistan build the two-stage solid-fuel Shakeen II MRBM, in 1999.

China’s Missile Transfer to Pakistan: Issues and Policies

The major issues and policies that govern China’s missile assistance to Pakistan has a very strong bearing on two issues: undermining the nonproliferation issues and China’s relations with the U.S.

Non-Proliferation Issues

China acceded to Non Proliferation Treaty (NPT) in December 1991. And after a year on March 9, 1992, China joined the treaty. It was reported that China, after acceding to NPT, had signed a $500 million contract with Pakistan to build a 300 megawatt nuclear power reactor. As the project was placed under International Atomic Energy Agency (IAEA) safeguards, the problem arises due to Pakistan being not a full scope safeguards state and such a contract definitely comes under restriction. Another issue includes the IAEA. Initially, China refused to adopt IAEA full-scope safeguards

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105 Wendy Frieman, n.103.
106 Ibid.
However, in 1984, China joined the IAEA and formally agreed to impose IAEA safeguards on its nuclear exports. Ostensibly, Pakistan is also a member of the IAEA and even accepted inspection on its power and research reactors. Besides this, Pakistan, earlier served the board (35 member of IAEA) for eight terms earlier, was once again elected to the board of governors in December 1985.

The Missile Technology Control Regime (MTCR) is another important issue in the relationship between China and Pakistan vis-à-vis arms transfer. The MTCR was signed on April 1987, by United States, Great Britain, France, the Federal Republic of Germany, Italy, Canada, and Japan, endorses wide range of export restrictions. The range of restriction includes; ballistic missiles, space launch vehicles, sounding rockets as well as unmanned air vehicles, such as cruise missiles, target drones, and reconnaissance drones. To this, China verbally agreed to observe the MTCR guidelines. However, a former CIA official Gordon Oehler confirmed before the Senate Foreign Relations Committee that "China in fact delivered 34 M-11 missiles to Pakistan in 1992." This was followed by Chinese official assertion on 1993, that China had never sold complete

107 The term 'full-scope safeguards' means that all of a country's nuclear facilities and activities are inspected by the IAEA. Like the United States suspended its 1963 nuclear cooperation agreement with India in the early 1980s as the latter refused to agree to 'full-scope safeguards.' This law also requires termination of an agreement if any non-nuclear weapon state detonates a nuclear explosive device.
108 Matin Zuberi, n.104.
112 Missile Technology Control Regime established in 1987 by the G-7 countries, comprises guidelines for sensitive missile-relevant transfers that member states voluntarily undertake to follow in their national export controls, accompanied by an equipment and technology (ETA) specifying the technologies to which the guidelines apply. Thus, the legal force behind the MTRC stems from national legislation enacted by individual states, and not an overall treaty wherein all signatories undertake certain obligations that impart it a de jure force.
113 Yuri Pinchukov, "Arms Trade and the Proliferation of New Military Technologies", n.78, p. 23.
114 Ibid.

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missile technology or related components to Pakistan that is restricted by the guidelines and parameters of the MTCR.\(^{117}\)

However, ambiguity prevailed over M-11 missiles transferred by China to Pakistan and the commitment made by China to arms control regime. China kept insisting that the M-11 transfers fall within the MTCR.\(^{118}\) China is said to have even purposely modified the M-11 missile system so as to comply with 300 miles minimum range limit specified in the MTCR before transferring it to Pakistan.\(^{119}\) However, the U.S. Congressional Research Service Report states that the transfer of M-11 exceeded MTCR guidelines, as the missile has the inherent capability to deliver 500 kg warhead to 300 km.\(^{120}\) The U.S. in retaliation imposed sanctions on Chinese companies for the supply of M-11 missile.\(^{121}\) In 1994, China, again offered a written assurance that it would abide by the guidelines and parameters of MTCR in transferring missile technology.\(^{122}\) This was followed by signing a statement reaffirming its commitment to obey the MTCR during the U.S. Defence Secretary, William Perry’s visit to Beijing in October 1994.\(^{123}\)

However, China remains to be a main concern for proliferation. According to 1998, Majority Report of the Subcommittee on International Security, Proliferation and Federal Services, “China is the principal supplier of weapons of mass destruction and missile technology to the world, and U.S. government’s efforts to turn Beijing against international proliferation have met with little success.”\(^{124}\) The reason is simple, as about

\[^{117}\text{Yongjin Zhang, China in International Society since 1949, Alienation and Beyond (London: Macmillan Press Ltd, 1998), pp. 171-72.}\]
\[^{118}\text{R. Jeffrey Smith, n. 10.}\]
\[^{121}\text{Matin Zuberi, n. 104.}\]
the scope, contents, and the extent to which list of restricting missile come under the MTCR annex, Beijing never disclosed or revealed.\footnote{Daniel Williams, “U.S. Punishes China Over Missile Sales,” \textit{The Washington Post}, 26 April 1993, p. A1, as given in http://www.nti.org/db/china/mpakpos.htm}

\textit{Sino-U.S. Rift}

The persistent efforts of the United States to get China to adopt legally binding export controls on MTCR failed to achieve the purpose. As China’s assistance to Pakistan missile production facility at Rawalpindi highlights China’s insincerity over the pledge.\footnote{Douglas Waller, “The Secret Missile Deal,” \textit{Time}, 30 June 1997.} The Chinese official, on April 5, 1995, gave assurance that China’s adherence to the treaty applied only to those non-nuclear weapon states that are signatories of the NPT.\footnote{Banning N. Garrett and Bonnie S. Glaser, “Chinese Perspectives on Nuclear Arms Control”, \textit{International Security}, Winter 1995/96, Vol. 20, No. 3, pp. 43-78, as given in Matin Zuberi, “The Nuclear Non-proliferation Regime in Crisis”, in Raja Menon, (ed.), \textit{n.104}, p. 137.} China also committed itself to exercise “utmost restraint” at the NPT Review and Extension Conference in May 1995.\footnote{Matin Zuberi, \textit{n.104}, p. 137.} However, just three days after committing itself to exercise “utmost restraint” China conducted a nuclear test.\footnote{Ibid.} Besides this, Beijing renewed once more its missile nonproliferation pledge on curbing its missile technology transfers and assistance to South Asia in the “Jiang-Clinton Joint Statement” immediately after the Sino-U.S. summit of June 1998.\footnote{Sino-U.S. Presidential Joint Statement on South Asia, 27 June 1998, Beijing, as given in http://www.nti.org/db/china/mpakpos}

Thus, Beijing provided ready-to-launch M-9 (Ghaznavi/Haft), M-11 (Shaheen), and a number of Dong Feng 21 (Ghauri) ballistic missiles to Pakistan.\footnote{Mohan Malik, “Nervous Neighbours, China, Pakistan and India”, \textit{The World Today}, Vol. 58, No. 10, October 2002, p. 21.} Apart from these, China also provided missile related technologies including the dual use missile related items, raw materials and other accessories essential for missile manufacturing to Islamabad.\footnote{Ibid.} Such assistance definitely accounts Islamabad’s efforts to produce ballistic missiles.\footnote{Arpit Rajain, “Proliferation Concerns: An Overview”, in Swaran Singh (ed.), \textit{n.26}, p. 141.} Pakistan, on the other hand, in order to streamline its missile programme, assigned two parallel organisations Khan/Kahuta Research Laboratory (KRL) and National Defence Complex (NDC).\footnote{Rajiv Nayan, “Ballistic Missile Technology Transfers”, in Swaran Singh (ed.), \textit{n.26}. p. 181.} Besides this, China also provided technical
expertise in the field of missile development to Pakistan. For instance, in 2002, it is stated that large-scale missile production had started at Fetehjung missile factory near Islamabad built with Chinese assistance and expertise.135

China-Pakistan Cooperation in Nuclear Technologies: Genesis and Collaboration

China-Pakistan cooperation in nuclear related issues represents a unique characteristic in their relationship. This is because China’s assistance to Pakistan includes not only transferring of weapon design information, tests data and heavy waters, but also setting up their enrichment facilities.136

China-Pakistan Nuclear Collaboration during the 1950s

Pakistanis nuclear programme started when Dr. Nazir Ahmad appointed twelve members Atomic Energy Committee under his Chairmanship in 1955.137 The main purpose of the Atomic Energy Committee (AEC) set up in 1955 was to prepare a detail scheme for the survey and assessment of radioactive minerals.138 Since then, Pakistan hoped to install 1077 MW of nuclear capacity by 1975 and 2824 MW by 1990.139 After a year in 1956, the AEC was upgraded into Pakistan Atomic Energy Commission (PAEC), and in 1958 it proposed to install a reactor for undertaking fundamental and applied research and production of radio isotopes.140

China-Pakistan Nuclear Collaboration during the 1960s

During 1962-64, Pakistan expressed its anxiety over the imminent danger posed by wider dissemination of nuclear weapons. It is said that President Ayub Khan in his address at the seventeenth session of the General Assembly, said:

An aspect of disarmament which is of deep concern to Pakistan is the clear and present danger of the spread of nuclear weapons and the knowledge of their technology to States

140 S.B. Guha, n.138.
which do not now possess them...This imminent peril demands that the General Assembly give urgent consideration to conclusion of a treaty to outlaw the further spread of nuclear weapons and the knowledge of their manufacture.\textsuperscript{141}

It is also stated that the first record of discussion of a nuclear weapons programme in Pakistan cabinet took place in 1963.\textsuperscript{142} Similarly, at Nelore near Islamabad, Pakistan Institute of Nuclear Science and Technology (PINSTECH) was established to specially provide research and training facilities for nuclear scientists and technicians.\textsuperscript{143} And in the same year i.e. in 1963, with the assistance of IAEA, a 5 MW “Swimming Pool” type research reactor, originally promised by the United States, was set up.\textsuperscript{144} It became critical in December 1965.\textsuperscript{145} Interestingly, the first batch of artificial isotopes was produced at PINSTECH in October 1967.\textsuperscript{146} It is also stated that the research reactor facility was under the IAEA safeguards.\textsuperscript{147}

Prior to this, in October, 1964, China detonated nuclear explosion\textsuperscript{148} (See Appendix – 4 for chronology of China’s nuclear explosion). This event definitely signaled a positive sign for Pakistan. After a year, in 1965, Zulfikar Ali Bhutto made a famous remark that “we will eat grass to get the bomb.”\textsuperscript{149} And in 1968, Pakistan’s Foreign Minister Zulfikar Ali Bhutto, commissioned a feasibility study – one led by Pakistan Atomic Energy Commission and the other by defence scientists.\textsuperscript{150} “It would be dangerous to plan for less and our plan should therefore include nuclear deterrent...If Pakistan restricts or suspends her nuclear programme, it will not only enable India to blackmail Pakistan with her nuclear advantage, but would impose a crippling limitation on the development of Pakistan’s science and technology” Bhutto wrote in 1969.\textsuperscript{151}

\textsuperscript{141} U.N. Document A/PV 1133, 26 September 1962, p. 150, as cited in Brij Mohan Kaushik, O. N. Mehrotra, n.139, p. 49.
\textsuperscript{143} “USCRS Report on Pakistan’s Nuclear Capability”, as given in Sreedhar (ed.), n.110, p. 211.
\textsuperscript{145} Ibid.
\textsuperscript{146} Ibid.
\textsuperscript{148} B.M. Kaushik and O.N. Mehrotra, n. 144, p.50.
\textsuperscript{151} Zulfikar Ali Bhutto, n. 149.
Table 3 Early Exports of Nuclear Power Plants

<table>
<thead>
<tr>
<th>Date of Sale</th>
<th>Seller</th>
<th>Buyer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1957</td>
<td>USA</td>
<td>Belgium</td>
</tr>
<tr>
<td>1958</td>
<td>USA</td>
<td>West Germany</td>
</tr>
<tr>
<td>1959</td>
<td>UK</td>
<td>Japan</td>
</tr>
<tr>
<td>1959</td>
<td>USA</td>
<td>Italy</td>
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<td>1959</td>
<td>UK</td>
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<tr>
<td>1959</td>
<td>USA</td>
<td>Italy</td>
</tr>
<tr>
<td>1960</td>
<td>USA</td>
<td>Japan</td>
</tr>
<tr>
<td>1961</td>
<td>USA</td>
<td>France</td>
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<td>1962</td>
<td>USA</td>
<td>West Germany</td>
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<tr>
<td>1962</td>
<td>Canada</td>
<td>India</td>
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<tr>
<td>1963</td>
<td>USA</td>
<td>India</td>
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<tr>
<td>1965</td>
<td>USA</td>
<td>Spain</td>
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<tr>
<td>1965</td>
<td>Canada</td>
<td>Pakistan</td>
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<tr>
<td>1965</td>
<td>Canada</td>
<td>India</td>
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<td>1965</td>
<td>France</td>
<td>Spain</td>
</tr>
<tr>
<td>1965</td>
<td>France</td>
<td>West Germany</td>
</tr>
</tbody>
</table>


The Table 3 as given above shows that during the early 1960s Pakistan relied heavily on Canada for its nuclear programme. The table shows that in 1965, Canada was the only seller to Pakistan pertaining to nuclear technology and equipments. As the table shows that, interestingly China and U.S does not figure out during this period.

**China-Pakistan Nuclear Collaboration during the 1970s**

Generally, Pakistan’s nuclear weapons programme was initiated shortly after the devastating defeat in the 1971 Indo-Pakistani war.\(^{152}\) The then Prime Minister Zulfikar Ali Bhutto ostensibly announced his plan to develop nuclear arms at a secret meeting of Pakistan’s top scientist and nuclear aides in Multan.\(^{153}\) This move of Bhutto was considered as the turning point of Pakistan’s nuclear programme. It is stated that, Bhutto even tried to acquire a large reprocessing plant from France for extracting plutonium

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\(^{152}\) NPT opened for signatures in July 1968, adopted in 1970, and extended for an indefinite length of time in May 1995; the NPT expressly prohibits any state outside of the current five nuclear-weapon states (United States, Russia, Britain, France, and China) to pursue nuclear weapons options. Its current membership is 191 states, i.e., all signatories of the UN Charter except India, Pakistan, Israel, and Brazil. Its mandate is enforced by the International Atomic Energy Agency (IAEA).

from spent power reactor fuel. 154 A notable key figure in the effort to acquire nuclear technology at this time was Dr. Abdul Qadeer Khan (a German trained metallurgist, who worked intermittently at a classified centrifuge enrichment plant at Almelo, the Netherlands, where he is believed to have gained access to key plans and listings of component suppliers). 155

By 1972, Zulfikar Ali Bhutto started taking more concrete steps. On January 20, 1972, Bhutto called a meeting of scientists in Multan to prepare a report about the status of Pakistan's nuclear programme. 156 Munir Ahmed Khan (who was with the IAEA in Vienna at the time) conducted a survey and concluded that the progress had been slight. The programme, they said, lacked leadership. 157 To boast the morale of the young scientist, Bhutto said that in order to guard against the possibility of India becoming nuclearised, he (Bhutto) insist that Pakistan should have fission in three years. To which the young scientist replied "we can do it, you will have the bomb." 158 As mentioned above, this period witnesses Bhutto's famous proverbial phase that "we will eat grass but we'll have our bomb." 159

Pakistan's ambitious plan to acquire nuclear technology got endangered during this time. In 1975, an international group (London Supplier's Group formed in 1975) imposed an embargo of the supply of nuclear material and technology to Pakistan for not complying with the NPT. 160 This was followed by the imposition of Symington Amendment in 1996. 161

However, dramatically in 1978, shortly before his execution at the hands of his successor General Zia-ul-Haq, Bhutto declared that "Pakistan was on the threshold of a full nuclear capability" all we needed, he wrote, "was the nuclear reprocessing plant." 162 However, Bhutto's comprehensive nuclear policy for Pakistan does not end here. Apart

154 Steven R. Weisman and Herbert Krosney, n. 153.
156 Owen Bennett Jones, n. 17, p. 196.
157 Ibid.
161 Owen Bennett Jones, n. 17, p.199.
from reprocessing plant, Pakistan also acquired hardware and technology for a uranium enrichment plant using ultra-high-speed centrifuges, a plant potentially capable of producing highly enriched uranium, alternative nuclear weapons material to plutonium.\textsuperscript{163}

Washington did use the Symington Amendment to impose sanctions to Pakistan in 1979; however, it was later lifted by President Carter due to heightened danger of Soviet invasion of Afghanistan.\textsuperscript{164}

\textbf{Pakistan’s Major ongoing Nuclear Plant}

The following major nuclear power plant discussed below depicts Pakistan’s nuclear policies over a period of time. In order to understand the different stages and development the classification is made on the basis of chronological form.

\textit{Karachi Nuclear Power Plant (KANUPP)}

Pakistan reached an agreement with Canada to build a nuclear reactor known as Karachi Nuclear Power Plant (KANUPP) in 1965.\textsuperscript{165} The plant operates with fuel, spare parts and Canadian expertise, and is said to produce electricity and plutonium with potential military implication.\textsuperscript{166} KANUPP was actually a turnkey project and no other plant has since been set up in Pakistan, with the initial supply of heavy water from the United States.\textsuperscript{167} However, met with grave difficulty to sustain, PAEC made a formal request to France for the procurement of a reprocessing plant and a contract was signed.\textsuperscript{168} Even the IAEA gave approval in February 1976, but ultimately the plant was never built.\textsuperscript{169}

It should be noted that KANUPP operational reactor located near Karachi was supplied by Canadian General Electric, and is of the CANDU variety, fueled with natural


\textsuperscript{164} George Perkovich, \textit{India’s Nuclear Bomb: The Impact on Global Proliferation}, (California: California University Press, 1999), p. 221.


\textsuperscript{166} Ibid.


\textsuperscript{169} Ibid.
uranium and requiring heavy water for its operations. 170 It also uses natural uranium containing bulk U-238 fuel for its reactor; this makes it clear that the KANUPP nuclear reactor produces plutonium. 171 Even, technically, KANUPP working at about 60% efficiency with fuel core-loading of about 28 tons could theoretically breed about 50-60 kg of plutonium. 172

On September 1, 1985, a local press in Pakistan has been quoted as saying that “although Canada stopped supplying fuel and spare part for the plant, Pakistan scientists have made substantial achievements in mastering the techniques of modifying and updating systems of the country’s nuclear plant at Karachi (KANUPP) in mining and processing of uranium and running of the plant.” 173 The plant supplies 0.4 percent of the total energy consumption. 174 In order to provide sound basis of the development of Pakistan’s future nuclear power plants, the control and instrumentation group at KANUPP has set up a small scale simulation facility which serves as a development tool for acquiring thorough understanding of the various control loops before carrying out any modifications to keep its aging electronic instrumentation in operation. 175

KAHUTA

In 1974, A.Q. Khan wrote to Zulfikar Ali Bhutto about his interest to return to Pakistan. 176 It is stated that Khan and Bhutto met in Karachi, where the former explained what he can do about Pakistan’s nuclear programme. Thereafter, Khan spent months in the PAEC, and ultimately the “Kahuta” laboratory came into being. 177 The centrifuges working at Kahuta are the G-1 and G-2 an early-generation German technology and the only person involved with the programme is A.Q. Khan. 178 In the words of Muhammad

172 Dr. F. Hassan, “Pakistan’s Nuclear Programme: Capabilities and Limitations”, given in Sreedhar (ed.), n.110, pp. 274-5.
175 Ibid.
177 Ibid.
178 Muhammad Aslam, Dr. A. Q. Khan and Pakistan’s Nuclear Programme. (Rawalpindi: Diplomat, 1989), p. 58.
Aslam, "Kahuta is solely A.Q. Khan’s baby." The laboratory was established at the per with the essential centrifuge know-how that Khan obtained from Netherlands, to which the Dutch government also confirmed.

According to the U.S. military sources "Chinese nuclear scientists have been working in Pakistan’s nuclear facility at Kahuta." The foremost objective was to learn the gas diffusion process of purifying uranium, and bargain weapon design. "China had also transferred a complete nuclear weapon design to Pakistan along with enough weapons-grade uranium for two nuclear weapons" the U.S. Intelligence agencies reported in 1983. The report also stated that the Chinese scientist regularly visits the complex (Kahuta) and China even supplied Pakistan a research reactor along with 1kg of HEU, and agreed to build a 300 MW reactor. Apart from this, "People’s Republic of China was assisting Pakistan, its long-time ally, in operating the Kahuta plant and had given Pakistan the design of a nuclear weapon" a press accounts quoted Reagan administration officials as saying. Besides this, Pakistani scientists working at Kahuta is said to have prepared a number of nuclear designs and cold tested them in 1983-84 and by 1985, significant threshold of enriching uranium (weapon-grade) beyond 90% were accumulated.

And in 1984, Dr. A. Q. Khan announced that the Kahuta plant had succeeded in producing enriched uranium. The main difference between Pakistan Atomic Energy Agency (PAEA) and Kahuta Research Laboratory (KRL) is that – PAEA is assigned with the task of plutonium-based nuclear weapons, and where as KRL is assigned to develop

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179 Muhammad Aslam, n. 178.
184 Matin Zuberi, n. 104.
enriched uranium-based nuclear weapons. According to the U.S. intelligence report “a subsidiary of the China National Nuclear Cooperation (CNNC) had sold 5,000 ring magnets to an unsafeguarded Pakistani nuclear facility located at Kahuta in 1995.” (See Appendix – 5 for chronology of Pakistan nuclear programme). The component is meant to produce weapons-grade enriched uranium. These magnets were said to have been sold to A.Q. Khan Research Laboratories in Kahuta. Although, China’s Foreign Ministry spokesman Shen Guofang rejected the allegations by stating “China has never transferred or sold any nuclear technology or equipment to Pakistan.” However, the Vice-President of the CNNC admitted that the supply has taken place and sought to justify by saying “the sale did not violate any domestic or international laws as magnets sold to Pakistan were not magnetised.”

Pakistan’s involvement in proliferation is also a well known fact. Its reported involvement with Saudi Arabia, the Gulf States and North Korea add up to the problem. Thus, during July-December 1996, China provided missile assistance to both Pakistan and Iran. In 1998 a report indicates that Chinese ship carried special metal and electronics to the Pakistani Khan Research Laboratory. Again after a year, in 1999, the transfer of metal-working and a special furnace were stated to have taken place. China is also said to have helped the Iranian’s to build the Sahib 3 and Sahib 4 medium-
range ballistic missiles.\textsuperscript{198} It is stated that Sultan Bin Abdul Aziz, the Saudi crown prince and Defence Minister is said to have visited the Kahuta plant amid tight security and great secrecy on August 1999.\textsuperscript{199} Again in 2000, China is said to have transferred fuel improvement ventilation system to Pakistan.\textsuperscript{200} This was followed by another report in 2002 that China supplied solid fuel to Pakistan.\textsuperscript{201}

In 1976, Pakistan started exercising its nuclear options, it is stated that Pakistan contracted to buy a nuclear reprocessing plant from France.\textsuperscript{202} The CHASNUPP plant is designed to use enriched uranium.\textsuperscript{203} However, in an editorial in the Pakistan, \textit{Economist} dated October 21, 1978, it has been suggested that the reprocessing plant idea was cooked up to sabotage the nuclear power programme, as it also affected the main atomic energy projects like CHASNUPP.\textsuperscript{204}

China also helped Pakistan build 40 MW Khushab Plutonium producing reactor and facility for extracting weapon grade plutonium from spent fuel.\textsuperscript{205} The Khushab reactor set up in 1995 with Heavy water research supplied by China.\textsuperscript{206} It is also reported that Khushab plutonium production reactor has been designed built, and outfitted by China.\textsuperscript{207} This new facility provided by China was to produce plutonium and tritium, and to make it possible for Pakistan to develop more advanced and compact plutonium warheads for their missiles.\textsuperscript{208} Khushab also seeks to plug the missile link in Pakistan’s

\begin{thebibliography}{99}
\bibitem{199} Owen Bennett Jones, n. 3, pp. 218-19.
\bibitem{201} Ibid.
\bibitem{204} Ibid, p. 92.
\bibitem{206} Brahma Challeney, “Pak Fuel, Chinese bomb”, \textit{The Hindustan Times} (New Delhi), 1 May 1995, p.12.
\bibitem{208} Brahma Challeney, n. 207.
\end{thebibliography}
deterrent plans by arming its Chinese-fathered Ghauri intermediate long range ballistic missile (IRBM) with a warhead made of plutonium.\textsuperscript{209}

The first stage of the CHASHMA (CHASHMA-I) nuclear power plant with Chinese assistance was built in Punjab.\textsuperscript{210} In 1999, China helped Pakistan develop a second nuclear power plant in CHASHMA (CHASHMA-II).\textsuperscript{211} Prior to this, in a capacity building exercise for Pakistani nuclear scientists “the Chinese allegedly involved them in a nuclear test at its Lop Nur test site in 1989.”\textsuperscript{212} Substantial progress was made for the construction of 300 megawatt nuclear power plant at CHASHMA with Chinese financial and technical help during Gen. Musharraf’s visits to China on October/November 2003.\textsuperscript{213} The project is the second phase of a $700 million between China and Pakistan.\textsuperscript{214} From this plant Pakistan is expected to obtain enriched plutonium.\textsuperscript{215} The main difference between the two projects is that – The machinery for CHASHMA-I was manufactured in China and was later handed over to Pakistan on a turn-key basis, whereas, the components for CHASHMA-II would be manufactured in Pakistan.\textsuperscript{216} Pertaining to the CHASHMA 300 megawatt nuclear power plant, the Chinese Foreign Ministry spokesman Liu Jianchao has been quoted as saying on March 9, 2004, that “Sino-Pak nuclear power plant project would be entirely devoted to peaceful uses.”\textsuperscript{217}

\begin{itemize}
  \item \textsuperscript{209} Joseph S. Bermudez Jr., “DPRK-Pakistan Ghauri Missile Cooperation”, Federation of American Scientists”, (FAS), http://www.fas.org/spp/starwars/crs92056htm
  \item \textsuperscript{210} “Pakistan, China to strengthen military cooperation”, VII, News, November 6, Beijing, POT, Pakistan Series, Vol. XXXI, No. 267, November 11, 2003, p. 4941.
  \item \textsuperscript{211} “China’s Nuclear Exports and Assistance to Pakistan” Center for Non-proliferation Studies, Monterey Institute of International Studies, August 1999, available at http://cns.miis.edu/research/India/china/npakpos.htm
  \item \textsuperscript{212} Ibid.
  \item \textsuperscript{217} “Chashnupp-II Deal in Final Stages says China”, XXV, News, March 10, 2004, Beijing, POT, Pakistan Series, Vol. XXXII, No. 61, March 12, 2004, p. 1130.
\end{itemize}
Thus, Pakistan’s nuclear programme began as a response to the Indian nuclear debate of the 1960s.\textsuperscript{218} And the Chinese connection in its efforts especially in the 1970s can be attributed to the following factors: \textit{first}, both Pakistan and China were paranoid of India’s threat vis-à-vis 1971 outcome; \textit{second}, India’s nuclear test of May 1974 had completely changed the strategic scenario and the context of China-Pakistan ties; \textit{third}, China was less circumspect in further sharing nuclear secrets with other countries; and \textit{finally}, Zulfikar Ali Bhutto’s ardent nuclear policy for both peaceful and for defence purposes.\textsuperscript{219}

Bhutto’s Nuclear Policy: The Chinese Engagement

Zulfikar Ali Bhutto was personally responsible for laying the foundations of Pakistan’s nuclear cooperation with China.\textsuperscript{220} As early as the mid-1960s Bhutto made strong overtures to China to help Pakistan develop nuclear weapon capabilities.\textsuperscript{221} Bhutto was of the opinion that Pakistani bomb would not only deter the conventional and nuclear threat from India but would put them in the forefront of the Islamic world.\textsuperscript{222} Therefore, according to Bhutto, a nuclear weapons programme in his view could turn Pakistan into a world power.\textsuperscript{223} Bhutto’s ambitious and seriousness is clearly reflected in his statement:

\begin{quote}
"I want the Muslim nation of Pakistan to possess a strong army, air force, and navy. Every family in Pakistan should provide due attention and assistance in the task of increasing the country’s military power. This can be possible if a member from each family is asked to join the country’s armed forces. I am confident that Pakistan’s Atomic Energy Commission would vigorously pursue its objective of paving the way for Pakistan, sooner or later, to join the nuclear club."\textsuperscript{224}
\end{quote}

Bhutto, as Pakistan’s Foreign Minister was largely responsible for laying the foundations of China-Pakistan defence cooperation way back in 1963-66.\textsuperscript{225} He even

\begin{flushright}


220 Swaran Singh, n. 133, p. 190.

221 Arpit Rajain, n. 133, p. 139.

222 Stephen Philip Cohen, n. 218, p. 207.


\end{flushright}
approached Ayub Khan in 1965 to sanction Rs 30 crores for establishing a plutonium reprocessing plant. Ayub, however, turned down Bhutto’s request due to economic condition.226 The euphoria of Bhutto’s proverbial phrase of 1966, “If India builds the bomb, we will eat leaves or grass, even go hungry but we will have to get one of our own” dominated the situation.227

During the 1970s, Bhutto showed equally ardent interest to acquire the nuclear technology. According to Bhutto’s close aide Kausar Niazi, it was Dr. A. Q. Khan had offered his services to Bhutto in the early 1970s.228 The fall of Yahya Khan Regime in 1971, cleared the way for the new Premier Zulfikar Ali Bhutto to provide a fillip to the country’s nuclear programme.229 It is stated that in 1972, Bhutto met about 50 Pakistani scientists with whom he expressed his desire that Pakistan should develop a nuclear weapon.230

Thereafter, concrete Pakistan’s missile programme begun in 1974 under the Premiership of Bhutto.231 Bhutto was aware that New Delhi was trying to acquire nuclear weapons capability.232 “India’s test of 1974 was the turning point. It was then Bhutto got really serious” A.Q. Khan has been quoted as saying.233 This vision of Bhutto led to the success of the nuclear enrichment facility at Kahuta to take off.234 The involvement of A.Q. Khan was obvious, in 1975 A.Q. Khan secretly plundered the Amelo facility to provide Pakistan with “blueprints of the enrichment plant, design and literature relating to centrifuge technology and lists of suppliers, equipment and materials.”235 Interestingly, at this time the supply of nuclear technology to Pakistan could not achieve any

231 Cameron Binkley, n. 5.
233 Ibid.
breakthrough. On October 1975, Bhutto went to Paris and finalised a deal to buy a turn-key plutonium reprocessing plant.

Similarly, in 1975, Bhutto talked of a nuclear energy programme in Pakistan that included the installation of a 600 MW reactor in 1980 and 10 more reactors in the following decade. This was followed by a secret pact with China to help Pakistan to produce nuclear arms during Bhutto’s visit to Peking in May 1976. After a decade of this agreement, Bhutto wrote “In the present context the agreement of mine concluded in June 1976, will perhaps be my greatest achievement and contribute to the survival of our people and our nation.” General Zia-ul Haq who succeeded Bhutto too declared that “Pakistan can enrich uranium up to five per cent concentration (of U 235)” the General also added that “the uranium has to be enriched to 90 per cent in order to be usable in weapons.” The seriousness of Zia-ul-Haq, however, differs with the Chairman of PAEC, Dr. Munir Ahmed Khan, Khan stated that “Pakistan would neither acquire nor develop nuclear weapons.

Thus, Bhutto’s period witnesses a major breakthrough in Pakistan’s nuclear policy. Bhutto’s three consecutive visits to Beijing – in February 1972, September 1974 and April 1976 helped China to concede to Bhutto’s requests and forge nuclear ties. The third visit was speculated with India’s nuclear test, a press report stated that China had agreed to provide Pakistan with nuclear assurance or umbrella or some promise of assistance in developing nuclear deterrent. Besides this, in Bhutto’s third visits he was accompanied by his Scientific Advisor Dr. Abdus Salam (the person behind Pakistan’s

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239 B.L. Kak, n. 224, p. 51.

240 Zulfikar Ali Bhutto, n. 149, p. 223.


242 Times of India, New Delhi, December 6, 1979, as given in Brij Mohan Kaushik, O. N. Mehrotra, n.138, p. 41.

243 Swaran Singh, n. 133, p. 190.

nuclear programme before he was replaced by Dr. A.Q. Khan. In March 1977, the Chinese reciprocated, another team of Chinese scientists toured Pakistan and held meetings with Pakistani scientists. In the same year on January 29, 1977, China signed a protocol with Pakistan on scientific and technical cooperation. This protocol included the Chinese assistance for development of nuclear energy.

Interestingly, the nuclear programme was presented by Pakistani leaders and commentators as an Islamic endeavour and sought political as well as financial support from the oil-rich countries of Middle East. Bhutto used this opportunity to woo the Arab countries judiciously. It is stated that, Saudi Arabia showed its willingness to finance a reprocessing plant for the manufacture of plutonium for Pakistan in return for the use of this facility itself. This financial assistance was meant to salvage Pakistan from bankruptcy. Bhutto’s decision to build the bomb can also be seen in his memoirs, He wrote, “We know that Israel and South Africa have full nuclear capability. The Christian, Jewish and Hindu civilizations have this capability. The Communist powers also possess it. Only the Islamic civilization was without it, but that position was about to change.” However, the notion of “Islamic bomb” does not necessarily mean that all the Muslim countries endorse it. For instance, Prince Naef bin Ahmed Al-Saud, responsible for Saudi military planning dismissed the notion by stating that “Saudi Arabia does not accept the notion that a Pakistani bomb is an Islamic bomb.”

At the same time Bhutto also realised that nuclear weapons trimmed the size of the military budget and reduces the importance of the army. Ostensibly, he (Bhutto) was prematurely removed by a military coup in 1977, which brought General Zia-ul-Haq to power.

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246 ibid
247 Swaran Singh, n. 133, p. 190.
249 B.L. Kak, n. 224, p. 52.
254 Praful Bidwai and Achin Vanaik, n. 66, p. 216.
temporarily suspended its nuclear assistance to Pakistan.255 Once came into power, Gen. Zia-ul-Haq also called for a careful study of the meaning of the word “Islamic Bomb”.256 He said “the U.S., Israel, the Soviet Union and India have atomic bomb and asked why they don’t call Christian or Hindu bomb.”257 Even the father of Pakistan nuclear technology A.Q. Khan in an interview described the “Islamic Bomb” as a figment of the Zionist mind which has been used in full force by anti-Islamic Western countries.258 And denied the allegation of naming Pakistan’s as “Islamic Bomb” and blamed it to the Jewish dominated media.259 However, the Soviet military intervention in Afghanistan in 1979 changed the whole scenario in Pakistan’s favour. It is stated that both China and the U.S. continued to assist Pakistan during this period.260

**China-Pakistan Nuclear Collaboration during the 1980s**

The Soviet military intervention in Afghanistan brought General Zia-ul-Haq quick recognition as Pakistan became a frontline state. This made the U.S. relax its proliferation norms towards Pakistan, and China on the other hand exploited the situation well by filling the gaps on Pakistan’s nuclear weapon programme.261 In order to cement the relationship, Gen. Zia visited China in 1980 and 1982, to which the Chinese Premier Zhao Ziyang reciprocated the move by visiting Islamabad on June 1981, it was stated that an agreement on exploding a Pakistani nuclear device on China’s soil was muted out during his visit.262 “Our nuclear energy exclusively serves peaceful purposes, we do not develop any bomb, and we are not for nuclear weapons, the history of my government over the past two years is an open book” President Zia-ul-Haq has been quoted as saying in an interview as reported in the Frankfurter Rundschau on February 29, 1980.263

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255 Ibid
257 Ibid.
262 B.M. Kaushik and O.N.Mehrotra, n. 138, p. 133.
By 1982, A.Q. Khan succeeded in producing enough highly enriched uranium (HEU) for the bomb with weapon design, uranium and nuclear scientists assisted by China at Kahuta uranium enrichment facility.\footnote{Zulfikar Ali Bhutto, n. 162, p. 223.} He was the soul person responsible for providing Islamabad with technical secrets for building a gas centrifuge for uranium enrichment.\footnote{Zahid Malik, n. 168, p. 128.} A.Q. Khan is also said to have enriched 3 percent of uranium, the concentration needed for generating electricity.\footnote{Owen Bennett Jones, n. 17, p. 201.} After acquiring the HEU, the next step Pakistan looked forward was to have a warhead. According to A.Q. Khan, General Zia apparently gave him the go ahead to build a warhead in 1982, and after two years it is stated that the PAEC was able to produce a warheads using Kahuta’s design.\footnote{Ibid, p. 202.}


However, when China joined the IAEA\footnote{The International Atomic Energy Agency (IAEA) requires that a member state disclose the list of its nuclear facilities where the agency would conduct regular inspections to monitor compliance. It has the mandate, and capacity, to conduct surprise inspections, even of an intrusive nature, when it perceives that a member state is not disclosing all the information regarding its nuclear program.} on January 1984, Pakistan’s nuclear policy began to show redundant as China assures safeguards on its nuclear exports to non-nuclear weapon states.\footnote{Leonard S., Spector, Nuclear Proliferation Today, (New York: Vintage Books, 1984), pp. 23-48.} In an address to the Sixth National People’s Congress in May 1984, China’s Premier Zhao Ziyang declared China’s firm commitment to non-proliferation. “China does not engage in nuclear proliferation by helping other countries
to develop weapons" the Premier has been quoted as saying.\textsuperscript{273} Besides this, Pakistan being a member of the International Atomic Energy Agency (IAEA) makes it more complex to compile with China.\textsuperscript{274}

For Pakistan, the situation could not harm much. On October 21, 1985, President Zia was quoted in the \textit{New York Times} as saying that "Pakistan has neither the resources nor the desire" to develop nuclear weapons.\textsuperscript{275} This statement was different from his earlier statement of July 1984, on which he said "Pakistan has the capability to enrich uranium but it would never use that capability for any purpose other than peaceful ones."\textsuperscript{276} As Pakistan has come very close to the desired goal of making and possessing nuclear bomb, Gen. Zia's repeated assertion "of Pakistani desire to use nuclear energy only for peaceful purposes" was not believed by anybody argues Kalim Bahadur.\textsuperscript{277} Even the Head of Pakistan's enrichment programmes Dr. Abdul Qadir Khan, said on May 1984 that "it was theoretically possible for Pakistan not only to manufacture atomic bombs but also hydrogen bombs" and also emphasised that "Pakistan's enrichment programme was purely for peaceful purposes and was meant to meet the country's energy requirements."\textsuperscript{278} Besides this, in an interview to \textit{The New York Times} on February 10, 1984, Dr. Abdul Qadir Khan said that "Pakistan could enrich uranium and intimidate that Pakistan could produce a nuclear weapon if necessary."\textsuperscript{279} In 1984, a Pakistani press agency also announced that a research laboratory had succeeded in purifying graphite to over 90%. This pure graphite can be used in production reactors and is able to produce high-quality plutonium.\textsuperscript{280}

For China, its involvement with Pakistan vis-à-vis nuclear related issues continued even after becoming a member of various non-proliferation regimes. To

\begin{itemize}
\item \textsuperscript{273} Leonard S., Spector, n. 272, pp. 23-48.
\item \textsuperscript{276} Ibid.
\item \textsuperscript{277} Kalim Bahadur, "The Military Regime in Pakistan and Regional Security", in V.D. Chopra (ed.,) n.241, p. 159.
\item \textsuperscript{278} Nawa-I-Waqt, Lahore, \textit{February} 10, 1985, F1-F8, as quoted in Warren Donnelly, "Pakistan and Nuclear Weapons", as given in Sreedhar (ed.), n.110, p. 34.
\item \textsuperscript{280} Warren Donnelly, n. 110, p. 382.
\end{itemize}
strengthen its strategic ties, “China concluded a comprehensive nuclear cooperation agreement with Pakistan in September 1986.” 281 The accord offers technical assistance for more sensitive aspects of Pakistan’s nuclear programme. 282 According to media reports, China is said to begin assisting Pakistan during the same year of signing the accord i.e. 1986. It is stated that China reportedly transferred enough tritium gas (that could be used to achieve fusion hydrogen bombs and boost the yield of atomic bombs) for making 10 nuclear weapons to Pakistan. 283 Other estimation also suggest that Pakistan had carried out one cold test in September 1986 in the hills west of Chagai in order to verify the Chinese design of 1966. 284 The Chinese design of 1966 is the fourth kind tested by China. It is said to weigh less than a ton and could be easily carried by an aircraft like the Mirage III/V, F-16 or any of Pakistan’s modern missiles. 285 Pakistan’s count on China for transfer of fissile material despite FMCT continued. 286 Mr. Yaqub Khan, the then Foreign Minister of Pakistan on a visit to China on October 1986, signed an agreement with China for cooperation in the area of nuclear energy. 287

Even unconfirmed reports indicated that China has provided drawings and design data pertaining to the 20kt (kiloton) uranium bomb (it had tested in 1964) to Pakistan. 288 However, on March 13, 1987, Pakistan’s Ambassador Mr. Marker wrote that “Pakistan believes in non-proliferation and that its nuclear research is devoted entirely to peaceful purposes.” 289 President Zia also denied that Pakistan was developing nuclear bomb and


289 Warren Donnelly, n. 275, p. 381.
called for nuclear dialogue and nuclear weapons free South Asia discussion with India. Gen. Zia’s statement was nothing new, in August 1985, while addressing the National Assembly, Pakistan’s Minister of State for Foreign Affairs, Zarin Noorani, said “Pakistan is willing to join India in assuming binding international obligations to renounce nuclear weapons and firmly hold the view that a non-nuclear regime in South Asia will be in the best interest of all countries in the region.”

Once again, ostensibly, President Zia-ul-Haq has been quoted as saying in Time magazine dated March 30, 1987, that “Pakistan has the capability of building the bomb. You can write today that Pakistan can build bomb whenever it wishes.” This is because according to the U.S. intelligence sources, Pakistan not only acquired advanced know how from Chinese company URENCO, but also Chinese scientists were seen in Pakistani nuclear facility sites. And on March 1988, apart from Pakistan, China concluded an agreement with Saudi Arabia for the sale of its CSS-2 intermediate range ballistic missiles. This was followed by selling a medium-range missile to Pakistan and also agreed to export nuclear technology to Pakistan, Iran and Algeria. A detailed report on Pakistani nuclear programme by Hedrick Smith published in the New York Times Magazine dated March 6, 1988, accounted that “Pakistan has accumulated enough highly enriched uranium for four to six nuclear weapons” Smith also confirmed that “Pakistan had accumulated 220 pounds (100 kilograms) of the material and that Pakistan’s weapons are based on a Chinese design.” The weapon is said to weigh only 400 pounds (180 kilograms).

However, constant maneuvering between China, Pakistan and the U.S. ended after the Soviet withdrawal from Afghanistan in 1989. For the U.S. once again the Congress passed the Pressler and Glenn Amendments. However, for China, the relationship still

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294 SIPRI *Yearbook 1989*, p. 213.
297 Ibid.
persisted due to strategic interest. Many strategic analysts opined China's continued assistance to Pakistan as a counter measures against Indo-Russia warmth relationship.\(^{298}\) Apart from Pakistan, Beijing officially acknowledges that it has had cooperative nuclear technology agreements with over 40 countries since the 1980s.\(^{299}\) This sends a clear indication that China has a wider role to play in the region.

**China-Pakistan Nuclear Collaboration during the 1990s**

The disintegration of former Soviet Russia led to end of bi-polar world existing during the Cold War era. The privileges that Pakistan enjoyed with the U.S. and China also came to an end. However, unlike the U.S., China as usual was hardly taken aback by this change. During 1990-97, China is said to have secretly delivered more M-11 components to Pakistan, trained Pakistani nuclear technicians in China, and also supplied more than 30 M-11 missiles at Sargodha air force base near Lahore.\(^{300}\) This is because Pakistan relied heavily on China for defence equipment since 1990 as the U.S. stopped supplying them.\(^{301}\) Besides this, Pakistan is said to have made a deal with North Korea to get missiles in exchange for its uranium enrichment technology in 1990.\(^{302}\) Similarly, Pakistan's involvement with Iran's nuclear programme including designs for advanced and efficient weapons components provided by discredited Pakistani nuclear scientist A.Q. Khan was reported by CIA report.\(^{303}\)

Things got worsen up on July 1991, as Soviet Union joined the United States and other permanent members of the UN Security Council calling on for the elimination of all weapons of mass destruction from the Middle East and pledges to observe rules of restraint in conventional arms transfers.\(^{304}\) This led to a severe impact on China, as it

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\(^{300}\) Prakash Nanda, n. 14, pp. 105-106.


\(^{304}\) Andrei V. Shoumikhin, "Soviet Policy Toward Arms Transfers to the Middle East", in Shelley A. Stahl and Geoffrey Kemp (eds.), n.78, p. 231.
could sell only a very small number of short-range tactical missiles to Pakistan in 1991.\textsuperscript{305} However, strategists estimated that by 1991, Pakistan have produced about 160-260 sufficient HEU to produce roughly 8-13 nuclear weapons.\textsuperscript{306} China’s first indigenous nuclear power plant started generating electricity in 1991. It is estimated that China’s stockpile consists of at least 3mt (metric tons) of HEU and 1t of separated plutonium.\textsuperscript{307}

Chinese arms sales generally involved politically sensitive areas where regional conflicts rage because of the weapons system sold by China.\textsuperscript{308} Kanti Bajpai, captures five factors that caused Washington to invest on Pakistan’s nuclear programme, they are:

- Maintaining a tested alliance relationship; limiting U.S. influence in Pakistan; responding to Washington’s military and political support of Taiwan; cultivating a “moderate” and influential Muslim state; and gaining access to Pakistan’s U.S. – supplied advanced conventional weapons systems and possibly also to Pakistan’s nuclear technology.\textsuperscript{309}

Thus, in summation, China came as a rescue for Pakistan to fulfill its objective of acquiring weapons. Unclassified CIA report stated that “China was Pakistan’s primary source of nuclear related equipment and technology.”\textsuperscript{310} Thus, as mentioned earlier, Pakistan’s nuclear facilities starting from A.Q. Khan Research Laboratories at Kahuta; the Kanupp pressurised heavy water reactor; the Khushab reactor; the CHASHMA pressurised reactor; the CHASHMA plutonium reprocessing facility and the Rawalpindi research reactor (PAAR-2) are all built with Chinese assistance.\textsuperscript{311}

\textsuperscript{311} “China’s Nuclear Exports and Assistance to Pakistan” Center for Non-proliferation Studies, Monterey Institute of International Studies, August 1999, available at http://cns.miis.edu/research/India/china/npakpos.htm
The Ultimate Milestone: The Chagai Nuclear Test

China’s assistance of nuclear related programme to Pakistan came to an abrupt open when Pakistan conducted its first nuclear tests in Chagai hill\(^{312}\) on 28th and 30th May 1998, as a tit-for-tat against India’s nuclear explosion of 11th and 13th May, 1998.\(^{313}\) Pakistan used both the plutonium and uranium routes to acquiring nuclear capability (while the former route proved difficult during Zulfikar Ali Bhutto’s reign, General Zia-ul-Haq’s government opted for the uranium route in the late 1970s).\(^{314}\) On the contrary the test conducted by India involved warhead prototypes.\(^{315}\)

It is said that in Pakistan, immediately after India’s test, the period between 13-28 May, was buffeted by an unrelenting dissonance of voices urging Prime Minister Nawaz Sharif to match India’s test.\(^{316}\) In this tense situation, Sharif is said to have visited Almatay and met Dr. Abdul Qadeer Khan, officials of the intelligence organisations and a number of his cabinet members, and on May 13, he called a meeting of the Defence Committee of the Cabinet, the meeting was attended by Chiefs of Army, Air and Naval services; foreign and finance ministers; Dr. A. Q. Khan and some other senior military and civil officials.\(^{317}\) In this meeting the Prime Minister briefed on “security doctrine” and asked Dr. Khan and Dr. Samar Mubarak Mund of the Pakistan Atomic Energy Commission to prepare for nuclear tests.\(^{318}\)

This was followed by a six-member committee (including Finance Minister Sartaj Aziz, Foreign Minister Gohar Ayub, Information Minister Mushahid Hussain, Minister for State for Foreign Affairs Siddique Kanjo, Minister for Kashmir Affairs and Northern Areas Lieutenant-General (retired) Abdul Majid Malik and Minister for Religious Affairs

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\(^{312}\) Chagai is the nuclear test site in the Baluchistan mountain ranges in Pakistan, where it conducted six nuclear tests on May 28 & 30, 1998.


\(^{318}\) Samina Yasmeen, n. 317, p. 51.
and Minorities Raja Zafrul Haq) appointed at the Cabinet meeting held on May 14, 1998, to deliberate about aspects of Pakistan’s policy to deal with the threat to its security.\textsuperscript{319} Amongst the members, Gohar Ayub is said to favour an immediate nuclear response; whilst others – Sartaj Aziz, Sheikh Rashid, General Majid Malik, Choudhury Nisar and Mohammad Ishaq Dar – were concerned about the economic consequences of such a decision.\textsuperscript{320}

For Pakistan, the decisions taken by Prime Minister Nawaz Sharif in consultation with the Army Chief Jehangir Karamat suggest that the test was needed to keep the morale of the Pakistani Army high and also to equalise with India.\textsuperscript{321} Thus, the decision taken by Sharif was to meet this demand.\textsuperscript{322} Commenting on his decision to conduct the test Prime Minister Nawaz Sharif said:

"The pressure was irresistible at home. It was mounting on the government every day, every hour. The world outside is not aware of the emotional feelings of the people of this region. I have been holding on and exercising the utmost restraint. But we were disappointed that the world community really failed to take a strong action against India."\textsuperscript{323}

Even according to Altaf Hussain Quereshi, a close confidante of Prime Minister Nawaz Sharif, the nuclear option was to create an impression of our moral edge over India.\textsuperscript{324} Besides this, Sharif’s Foreign Minister, Gohar Ayub Khan, and his Finance Minister, Sartaj Aziz, were stated to have assured the Prime Minister that Pakistan could easily withstand a similar level of sanctions.\textsuperscript{325} The decision was even welcomed by Dr. A.Q. Khan, after the test Khan became more sanguine about Pakistan’s nuclear programme. “I never had any doubts, I was building a bomb. We had to do it” Khan has been quoted as saying.\textsuperscript{326}

\textsuperscript{319} Tariq Butt, “Only Gohar, Mushahid allowed to speak on foreign policy”, \textit{Nation}, May 19, 1998.
\textsuperscript{320} Syed Talat Hussain, “Pakistan Hedged an Obvious bet”, \textit{Nation}, 29 May 1998.
\textsuperscript{321} Praful Bidwai and Achin Vanaik, n. 66, p. 58.
\textsuperscript{322} \textit{Jang}, May 13, 1998, as cited in Owen Bennett Jones, n.3, p. 191.
\textsuperscript{323} \textit{Time}, June 8, 1998, as cited in Owen Bennett Jones, n.3, p. 193.
\textsuperscript{324} \textit{Jang}, May 28, 1998, as cited in Owen Bennett Jones, n.3, p. 192.
\textsuperscript{325} Owen Bennett Jones, n. 17, p. 193.
Although in Pakistan the Army holds a significant position in decision making pertaining to nuclear issue. Within Pakistan, vested political groups exploiting the situation can also be seen. For instance, the pro-restraint policy was portrayed as nothing more than a compromise and capitulation to Western interests. Still another group the Islamic political element maintained that “it was the religious duty of the government to engage in *Jihad*” for them *Jihad* was synonymous with testing a nuclear weapon of its own. The extreme right-wing Jamiat-ul-Ulema Islam (Sami ul Haq group) even announced its plan to hold a country-wide strike on May 23, 1998, urging the government to test a nuclear device.

**Chinese reaction**

China connection is clearly indicative, after the test, Pakistan’s Prime Minister Nawaz Sharif has been quoted as saying “Our friendship has been further strengthened.” Unlike Pakistan, China showed strong denunciation of the Indian nuclear tests. For China, “India’s attempt to emerge as a nuclear weapon power and become an important element in the Asian balance of power is unacceptable to China.” The reason is obvious India remains to be a factor for both China and Pakistan. No doubt, India’s peaceful nuclear explosive (PNE) in 1974 was a direct response to the Chinese nuclear test of 1964 and Beijing’s subsequent weaponisation. The step taken in 1998 can also be looked upon in similar line. India’s Foreign Minister Jaswant Singh, during a talk with Strobe Talbot in mid 1998, made it clear that “Our problem is China. We are not seeking parity with China. We don’t have the resources, and we do not have the will. What we are seeking is a minimum deterrent.”

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Analysts point the test as political and ideological compulsions of the new government (BJP), especially to keep the fragile coalition in power. The reality is that the test was preceded due to bigger potential threat emanating from China. According to Ashok Kapur –

(The) series of nuclear tests in May 1998 was...to address direct Chinese military pressure against India though Tibet and the Himalayan border, as well as the indirect Chinese through Pakistan and through Myanmar and the Bay of Bengal.

Thus, the nuclear test provided the only viable option to face nuclear neighbour (India). However, the credibility of the test as a deterrent cannot be fully recount in the case of Pakistan.

External factors

For Pakistan, the tests brought new dimensions in terms of bilateral relations. It is stated that “even Israeli political discourse changed as a result of the test and began adopting a friendlier posture vis-à-vis Pakistan.” After the test, Pakistan’s clandestine nuclear programme came to the limelight in the context of regional politics. The test also totally contradicted the pre-May 1998 days where Pakistan’s nuclear policy remained hidden and limited. However, in general term Pakistan’s test did not come as a surprise to the international community. This is because since then by 1998, Pakistan was credited with the ability to produce at least 15-20 nuclear weapons some even estimated it to 30.

337 Ashok Kapur, n. 2, p. 4.
341 Andrei V. Shoumikhin, “Soviet Policy Toward Arms Transfers to the Middle East”, in Shelley A. Stahl and Geoffrey Kemp (eds.), n.78, p. 224.
342 Samina Yasmeen, n. 317, p. 45.
343 Ibid, pp. 43-44.
344 PPNNP (Programme For Promoting Nuclear Non-Proliferation), Proliferation Related Developments: India and Pakistan (Southampton: PPNNP, 1998), p. 7, as cited in Samina Yasmeen, n.317, p. 44.
As diplomatically, India’s tests signified a setback for the Clinton administration vis-à-vis non-proliferation. Opinion differed in Pakistan about the tit-for-tat decision taken by Pakistan to go nuclear. Some opined that “no test decision” could offer a chance to establish Pakistan’s credentials as a responsible state. According to them, instead of going for the test, “Pakistan could have demanded at least 200 updated F-16, advanced radar, high-altitude anti-aircraft missiles, anti-ship missiles, air-to-air refueling tankers, tanks, ships and submarines, from the U.S.” A cautious and restrained nuclear policy is considered the best option available to Pakistan stated Zafar Iqbal Cheema. Besides this, speaker of the National Assembly, Ilahi Buksh Soomro, suggested that Pakistan should have used the Indian tests to bargain with the international community, especially the U.S.

**Nuclear Doctrine**

Pakistan seeks to ensure strategic symmetry with India and to achieve this Pakistani ruler follows both “general” and “immediate” deterrence. The general deterrence is conceptualised in terms of general military posture and an image emanating from it, where as immediate deterrence is seen in terms of specific military capability and threats emanating from it. The decision makers in Islamabad to go nuclear have been generally guided by what can be called the “India factor.” This is because Pakistan portrays nuclear capability as the ultimate equalizer vis-à-vis Indian conventional and nuclear might. “It limits India’s choice of launching a bigger offensive the way it has done in 1965” stated Ayesha Siddiqa-Agha.

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347 Yusuf Qureshi, “To test or not to test, that is the question”, *Nation*, May 20, 1998.
351 Ibid.
353 Samina Yasmeen, n. 317, p. 44.
354 Ayesha Siddiqa-Agha, n. 53, p. 179.
The three veterans of Islamabad’s foreign policy Agha Shahi, Zulfikar Ali Khan and Abdul Sattar were of the view that “nuclear weapons in South Asia do have deterrence value” and argued on October 1999, that “Pakistan does not need to match India’s nuclear arsenal bomb for bomb and that Pakistan should not agree to no first use.” Almost in similar line, even President General Pervez Musharraf subsequently confirmed that Pakistan does not plan to match India “missile for missile” or “bomb for bomb”, but with reference to “no first use” Musharraf stated that Pakistan reserved the right to use nuclear weapons first, “First use is the best method of deterring an Indian attack” Musharraf has been quoted as saying. Contrary to this, Pakistan’s nuclear deterrence was linked to a demonstrated capability and not merely the knowledge and the ability to test nuclear weapons. This is because to work out credible response “Pakistan should include testing a fission nuclear device, a thermonuclear device and a sub-kiloton test.” This completely contradicts its close ally China. Ever since 1964 China had “unilaterally promised unconditionally not to use nuclear weapons against any non-nuclear country or area.” However, on the contrary, Pakistan’s defence strategist was aware that unlike China, Pakistan missile cannot target every corner of India. This definitely pushes Pakistan into defensive in terms of capability. Thus, a minimum credible deterrence for Pakistan should comprise of both first and second strike capability. This is because apart from IRBMs, Shaheen and Ghauri, Pakistan does not have the technological wherewithal such as the permissive action links or second strike capability to make nuclear deterrence credible.

355 “Responding to India’s Nuclear Deterrence,” *Dawn*, October 5, 1999, as cited in Owen Bennett Jones, n.3, p. 203.
356 “Agha Shani, address to seminar organised by Islamabad Council of World Affairs and Institute of Strategic Studies held in Islamabad, February 2000,” as cited in Owen Bennett Jones, n.3, p. 203.
361 “Agha Shani, address to seminar organised by Islamabad Council of World Affairs and Institute of Strategic Studies held in Islamabad, February 2000,” as cited in Owen Bennett Jones, n.3, p. 204.
Proliferation by reaction is a phenomenon associated with pairs of conflict-parties or historic rivals rather than a chain reaction involving indefinitely long series of countries. In “proliferation-by-chain reaction”, if one country acquires nuclear weapons, the traditional foe feels itself under compulsion to acquire the same for the sake of protective equilibrium. This is how the tangle between China-Pakistan and India can be looked upon while dealing with proliferation issues.

China’s shipment of M-11 missile to Pakistan complicated China’s question about proliferation. The danger does not restrict to Pakistan alone, it started way back in 1987, when about a dozen of CSS2 intermediate-range missiles were shipped to Saudi Arabia. In addition to this, China also supplied missile related technology to Saudi Arabia, Libya, and North Korea. A newly declassified U.S. government document made public on March 5, 2004, shed new light on almost three decades of U.S. unease over China’s nuclear cooperation with Pakistan. The document concluded that “China provided assistance to Pakistan’s programme to develop a nuclear weapon capability.”

For Pakistan it was a dual benefit, the U.S. Defence Security Cooperation Agency stated on May 9, 2005, that the Bush administration authorised the sale of Harpoon anti-ship missiles and sidewinder air-to-air missiles to Pakistan.

President Pervez Musharraf concluded on November 7, 2003, that “Pakistan was fully justified in developing missiles and nuclear weapons to counter the threat posed by India.” Similarly, at the World Economic Forum in Davos on January 22, 2004, Mr. Musharraf said “Let me assume you Pakistan is an extremely responsible state, all strategic assets are under total custodial control. The Pakistani government has never and will never proliferate.” However, it is stated that Dr. A.Q. Khan, the head of the

363 James E. Dougherty, “Proliferation in Asia”, Orbis, (Fall 1975- Special Issue), p. 926.
367 “U.S. approves military equipment sales to Pakistan”, The Indian Express, 10 May, 2005.
Kahuta Research Laboratory in January 2004, confessed to selling nuclear technology to Iran, Libya and North Korea. These revelation brought China and Pakistan at the lime light of proliferation issues. The Chinese Foreign Ministry spokesperson is said to have argued with Islamabad to undertake the investigations “properly” and bring them to conclusion “quickly”. There have been reports that Pakistan is in talks with China to buy up to eight nuclear power reactors and construction on the plant expected to start by 2015 and end 10 years later.

Conclusion

Thus, China-Pakistan’s strategic cooperation in the field of missile and nuclear related issues depict how the two countries manage to move ahead in spite of differences. As discussed above, China, although being a member of various arms control regime, still continues to assist Pakistan in missile and nuclear related technology. In other words, Pakistan’s reliance on outside technology was fulfilled by China. Even the father of Pakistan’s nuclear programme A.Q. Khan admitted that “Pakistan could not have done it alone.”

On question pertaining to proliferation, both China and Pakistan failed to abide or follow the principles of various arms control treaty. China is accused of sharing missile and nuclear technology with Pakistan. While on the other hand, Pakistan gave nuclear technology to North Korea in exchange of missile know-how, and also provided aid to the Iranian nuclear programme. This allegation also became clear when on September, 2005 President Musharraf went on record to say that “Pakistan’s nuclear scientist A.Q. Khan, had probably exported dozen centrifuges to North Korea.”

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370 Wikipedia entry on Dr. A.Q. Khan at http://en.wikipedia.org/wiki/Adbul_Qadeer_Khan
375 David E Sanger, “Yes, AQK Helped N. Korea Go Nuclear: Pervez”, The Times of India, New Delhi, September 14, 2005, p. 27.
This indicates that ballistic missile systems transferred to Pakistan by China increased the fear of weapons of mass destruction in the region. "Nuclear weapons already exist, and is more likely to appear in the near future," Yuri Pinchukov reiterated.\textsuperscript{376} Similarly, Stephen P. Cohen was of the view that "China is more likely to be part of the problem than part of the solution."\textsuperscript{377}

China’s proliferation to Pakistan also withstood any sanctions of the non-proliferation\textsuperscript{378} In addition, China as an emerging responsible global power finds it increasingly difficult to sustain the proxy nuclear arms race by supporting Pakistan.\textsuperscript{379} To meet this, China not only provided Islamabad with nuclear bombs, uranium and plants (Kahuta, Khushab, CHASHMA, etc. all built with Chinese assistance) but also provided the delivery systems; ready-to-launched M-9 (Ghaznavi/Haft), M-11 (Shaheen), and a number of Dong Feng 21 (Ghauri) missiles to Pakistan.\textsuperscript{380} Therefore, in summation, China-Pakistan strategic relations in missile and nuclear related issues is a complex alliance covering convergence and divergence in their relationship.

\textsuperscript{376} W. Seth Carus, "Weapons Technology and Regional Stability", in Shelley A. Stahl and Geoffrey Kemp (eds.), \textit{Arms Control and Weapons Proliferation in the Middle East and South Asia} (London: Macmillan, 1992), p. 10.


