



MCGSMUN'15

# SITUATION IN SOUTH EAST ASIA WITH SPECIAL EMPHASIS ON NUCLEAR PROLIFERATION

A Brief prepared for the simulation of the Historic Security Council  
at MCGSMUN '15

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## Letter from the Executive Board

Greetings Delegates!

I welcome you to the historic simulation of the United Nations Security Council Meeting of 6<sup>th</sup> June 1998 at MCGSMUN '15. The UNSC discussed the clear and present danger of both India and Pakistan conducting nuclear tests in May 1998 and their declarations of being a Nuclear Weapon State, while not parties to the Nuclear Non-Proliferation Treaty. *Historic* refers to the nature of debate being restricted to certain dates in the past, foregoing the developments post the freeze date where Delegates will have the power to take their own decisions on behalf of their countries depending upon how debate progresses. This calls for a very detailed research and understanding of the matter at hand. These situations will test your understanding and application of your country's foreign policy, your research skills and foremost, your negotiation skills.

Your Executive Board is here to guide debate, and will be taking part in substantive debate only through any updates and questions to you. We will refrain from giving our opinion on matters unless we are ruling on Points of Orders. Regarding Rules of Procedure, I would ask you to be conversant in them but not regard them as strict and unbreakable. Rules of Procedure were made to aid debate, not hamper it, so we would like to keep the Points of Orders for usage of personal pronouns to a minimum. Further, we would love for the delegates to converse amongst themselves and promptly let the Executive Board know if they wish for any rules to be amended to improve debate.

We see a lot of delegates come in and expect a cut and dry debate on the Agenda. Going through a bunch of reports and reading their conclusions out is not going to work here. What this Executive Board expects is that you to express an analysis of the information you have, not to just read out that information. This will be a fast paced committee, and despite the tremendous pressure, it will be a refreshing experience from the usual pace of debate in MUNs. Here, you can take action; you can debate about HOW to take the action instead of only WHY that action is necessary. If you are well researched and versed in your country's foreign policy, be creative with your solutions, and be proactive! Never be afraid to suggest something out of the box, because it is going to be discussed by your peers if you can lobby. Do not be afraid of being wrong, because the best experience of being a Delegate at an MUN Conference is completely giving in to become that person and feel their responsibility and dedication to representing their nations.

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MCGS MUN 2015

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## On How to read the Brief

**Briefs are, contrary to popular belief, not supposed to contain all the information on a certain topic.** A good Brief consists of information that a delegate can use to gain basic information on the issue at hand and the links for further research that they must use to prepare for the final conference. All the information given in this Brief is from an unbiased perspective and we have refrained from making judgments as much as possible if none has been made by the United Nations.

This Brief is divided into sections to permit a delegate to comfortably understand the implications of various aspects of the issue. The first section is a very practical and integral aspect of being a delegate in this Security Council. It will also help you in future MUNs. It clearly marks out the sources that will be accepted as *Proof/Evidence in Council*. There are two important things to be kept in mind regarding this section. Firstly, that in situations where the Executive Board asks a delegate for proof/evidence to back up their statements, no other sources will be accepted as credible besides those mentioned here. Secondly, these are the only sources which will provide you with correct facts as they themselves follow strict monitoring and checking while reporting or collaborating data. **Research can be done from any source as such, but make sure you cross-check your statements and speeches with these sources to be on a safe side.**

An advised pattern of research is the following:

1. Understanding of the UN and the Committee – Mandate, etc.
2. Research on the allotted country, especially with respect to the agenda, past policies or actions taken
3. Understanding the Foreign Policy of the allotted country by studying past actions, their causes and consequences
4. Reading the Study Guide
5. Researching further upon the Agenda using the footnotes and links given in the guide
6. Prepare topics for moderated caucuses and their content
7. Assemble proof/evidence for any important piece of information/allegation you are going to use in committee

Keep your research updated using news websites given in the Proof/Evidence Section

The second section is *about the Security Council* and most probably the most fundamental of all. The functions and powers of all councils and committees are outlined by their mandate, which also defines the scope of debate in council. **The mandate also defines what kind of actions can be taken by the Security Council and how it is separate from the actions taken by other councils.**

The third section is the beginning of the substantive chapters of the Brief. It has a detailed history of both *India and Pakistan's Nuclear Programme*. Instead of just giving dry facts, I have attempted to include information that aims to get you acquainted with the political atmosphere of that time. Both chapters are equipped with footnotes and links for further research. These links will help you gain an in-depth understanding of the issues.

The fourth section *International Reaction...* provides you with links to start your research upon country stances regarding the nuclear tests conducted in 1998 from a variety of sources. The last section *UNSC and the Nuclear Tests* is the most important one when you consider becoming a delegate to discuss this issue at the UNSC. These links will acquaint you with the deliberations, presidential statements, press releases and SC Resolutions regarding the developments in 1998. However, please keep in mind that we have the **freeze date of 4 June 1998** and will be simulating the Meeting of the Security Council on **6<sup>th</sup> June 1998**.

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## Proof/Evidence in Council

Evidence or proof is acceptable from sources:

### 1. News Sources:

- a. **REUTERS**<sup>1</sup> – Any Reuters article which clearly makes mention of the fact or is in contradiction of the fact being stated by a delegate in council.
- b. **State operated News Agencies** – These reports can be used in the support of or against the State that owns the News Agency. These reports, if credible or substantial enough, can be used in support of or against any Country as such but in that situation, they can be denied by any other country in the council. Some examples are, RIA Novosti (Russia)<sup>2</sup>, IRNA (Iran)<sup>3</sup> BBC (United Kingdom)<sup>4</sup> and Xinhua News Agency and CCTV (P.R. China)<sup>5</sup>

### 2. Government Reports: These reports can be used in a similar way as the State Operated News Agencies reports and can, in all circumstances, be denied by another country. **However, a nuance is that a report that is being denied by a certain country can still be accepted by the Executive Board as credible information.** Examples are,

- a. **Government Websites** like the State Department of the United States of America<sup>6</sup> or the Ministry of Defense of the Russian Federation<sup>7</sup>
- b. **Ministry of Foreign Affairs** of various nations like India<sup>8</sup>, People's Republic of China<sup>9</sup>, France<sup>10</sup>, Russian Federation<sup>11</sup>
- c. **Permanent Representatives** to the United Nations<sup>12</sup> – Reports and other documents
- d. **Multilateral Organizations** like the NATO<sup>13</sup>, ASEAN<sup>14</sup>, OPEC<sup>15</sup>, etc.

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<sup>1</sup> <http://www.reuters.com/>

<sup>2</sup> <http://en.rian.ru/>

<sup>3</sup> <http://www.irna.ir/ENIndex.htm>

<sup>4</sup> <http://www.bbc.co.uk/>

<sup>5</sup> <http://cctvnews.cntv.cn/>

<sup>6</sup> <http://www.state.gov/index.htm>

<sup>7</sup> <http://www.eng.mil.ru/en/index.htm>

<sup>8</sup> <http://www.mea.gov.in/>

<sup>9</sup> <http://www.fmprc.gov.cn/eng/>

<sup>10</sup> <http://www.diplomatie.gouv.fr/en/>

<sup>11</sup> [http://www.mid.ru/brp\\_4.nsf/main\\_eng](http://www.mid.ru/brp_4.nsf/main_eng)

<sup>12</sup> <http://www.un.org/en/members/> (Click on any country to get the website of the Office of its Permanent Representative.)

3. **UN Reports:** All UN Reports are considered are credible information or evidence for the Executive Board of the Security Council.
  - a. **UN Bodies:** Like the UNSC<sup>16</sup>, GA<sup>17</sup>, HRC<sup>18</sup> etc.
  - b. **UN Affiliated bodies** like the International Atomic Energy Agency<sup>19</sup>, World Bank<sup>20</sup>, International Monetary Fund<sup>21</sup>, International Committee of the Red Cross<sup>22</sup>, etc.
  - c. **Treaty Based Bodies** like the Antarctic Treaty System<sup>23</sup>, the International Criminal Court<sup>24</sup>

**Under no circumstances will sources like Wikipedia<sup>25</sup>, Amnesty International<sup>26</sup>, Human Rights Watch<sup>27</sup> or newspapers like the Guardian<sup>28</sup>, Times of India<sup>29</sup>, etc. be accepted as PROOF; but may be used for better understanding of any issue and even be brought up in debate, if the information given in such sources is in line with the beliefs of a Government.**

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<sup>13</sup> <http://www.nato.int/cps/en/natolive/index.htm>

<sup>14</sup> <http://www.aseansec.org/>

<sup>15</sup> [http://www.opec.org/opec\\_web/en/](http://www.opec.org/opec_web/en/)

<sup>16</sup> <http://www.un.org/Docs/sc/>

<sup>17</sup> <http://www.un.org/en/ga/>

<sup>18</sup> <http://www.ohchr.org/EN/HRBodies/HRC/Pages/HRCIndex.aspx>

<sup>19</sup> <http://www.iaea.org/>

<sup>20</sup> <http://www.worldbank.org/>

<sup>21</sup> <http://www.imf.org/external/index.htm>

<sup>22</sup> <http://www.icrc.org/eng/index.jsp>

<sup>23</sup> <http://www.ats.aq/e/ats.htm>

<sup>24</sup> <http://www.icc-cpi.int/Menus/ICC>

<sup>25</sup> <http://www.wikipedia.org/>

<sup>26</sup> <http://www.amnesty.org/>

<sup>27</sup> <http://www.hrw.org/>

<sup>28</sup> <http://www.guardian.co.uk/>

<sup>29</sup> <http://timesofindia.indiatimes.com/>

## About the United Nations Security Council



Under the Charter, the Security Council has primary responsibility for the maintenance of international peace and security. It has 15 Members, and each Member has one vote. Under the Charter, all Member States are obligated to comply with Council decisions. The Security Council takes the lead in determining the existence of a threat to the peace or act of aggression. It calls upon the parties to a dispute to settle it by peaceful means and recommends methods of adjustment or terms of settlement. In some cases, the Security Council can resort to imposing sanctions or even authorize the use of force to maintain or restore international peace and security. The Security Council also recommends to the General Assembly the appointment of the Secretary-General and the admission of new Members to the United Nations. And, together with the General Assembly, it elects the judges of the International Court of Justice.

**You are also advised to look into the Practice of the UN Security Council<sup>30</sup> and how the Charter affects the same. This will be highly informative as to the inner workings of the SC and hence, debate on it.**

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<sup>30</sup> <http://www.un.org/en/sc/repertoire/actions.shtml>



*Agenda: The  
Situation in South  
East Asia with  
special emphasis on  
Nuclear  
Proliferation*

*Freeze Date: 4 June 1998*

*Date of the simulation: 6 June 1998*

## History of the Issue

### India's Nuclear Programme

#### Background

India's nuclear program began in 1944 when Dr. Homi Jehangir Bhabha wrote to *Sir Dorabji Tata Trust* for starting Nuclear Research in India on 12th of March.<sup>31</sup> *Tata Institute of Fundamental Research* was hence inaugurated on December 19, 1945.<sup>32</sup> After Indian independence from United Kingdom, Indian Prime Minister Jawaharlal Nehru authorized the development of a nuclear program headed by Homi J. Bhabha.<sup>33</sup> On April 15, 1948 *Atomic Energy Act* passed focusing on peaceful development of nuclear energy. India was heavily involved in the development of the *Nuclear Non-Proliferation Treaty*<sup>34</sup>, but ultimately opted not to sign it.

Bhabha allegedly moved the nuclear program in a direction towards weapons design and production. There were two important infrastructure projects which were commissioned —1) A Thorium Plant *Trombay Atomic Energy Establishment* on 1st August 1955.<sup>35</sup> 2) A governmental secretariat, *Department of Atomic Energy (DAE)*, on 3rd August 1954) of which Bhabha was the first secretary.<sup>36</sup> In the period of 1954 to 1959, the nuclear program grew swiftly and by 1958 the DAE had 1/3 of the defense budget for research purposes.<sup>37</sup>

“We must develop this atomic energy quite apart from war — indeed I think we must develop it for the purpose of using it for peaceful purposes. ...Of course, if we are compelled as a nation to use it for other purposes, possibly no pious sentiments of any of us will stop the nation from using it that way” - Jawaharlal Nehru, 1st Prime Minister of India In 1954.

In 1954, India allegedly reached a verbal understanding with the United States and Canada, under the Atoms for Peace program.<sup>3839</sup> The United States and Canada ultimately agreed to provide and established the CIRUS research reactor, also at Trombay. Acquisition of CIRUS

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<sup>31</sup> <http://www.idsa.in/npihp/documents/IDSA-HBP-12031944.pdf> | The Original Letter

<sup>32</sup> <http://www.idsa.in/npihp/documents/IDSA-HBP-01011954.pdf> | Speech of Dr. Bhabha at the Foundation Stone laying Ceremony of TIFR

<sup>33</sup> <http://www.inc.in/about-congress/history/literature/5-Journey-of-a-Nation/10-Nehru-and-Nation-Building> | Please read the section on Nuclear Energy and Space Research

<sup>34</sup> <http://www.un.org/disarmament/WMD/Nuclear/NPT.shtml> | UN Office of Disarmament Affairs

<sup>35</sup> <http://www.barc.gov.in/about/> | Read the Section on Heritage

<sup>36</sup> <http://dae.nic.in/?q=node/394>

<sup>37</sup> <http://nuclearweaponarchive.org/India/IndiaOrigin.html> | Nuclear Weapons Archive

<sup>38</sup> [http://www.armscontrol.org/act/2003\\_12/Lavoy](http://www.armscontrol.org/act/2003_12/Lavoy) | Arms Control Association

<sup>39</sup> <http://www.idsa.in/npihp/documents/IDSA-DAE-19111966.pdf> | Text of important letters between India and United States of America on Development of Nuclear Energy for peaceful purposes

is considered to be a watershed event in nuclear proliferation, with understanding between India and the United States that the reactor would be used for peaceful purposes only.<sup>40</sup> CIRUS was an ideal facility to develop the plutonium device. Therefore, Nehru refused to accept the nuclear fuel from Canada, and started the program to develop the indigenous nuclear fuel cycle.

On July 10, 1960 CIRUS – the 40 Megawatts research reactor attained *criticality* (The condition in a nuclear reactor when fissionable material can sustain a chain reaction by itself).<sup>41</sup>

In July 1958, Nehru also authorized "*Project Phoenix*" to build a reprocessing plant with a capacity of 20 tonnes of fuel a year - a size to match the production capacity of CIRUS. The plant used the PUREX process and was designed by an American firm, Vitro International. Construction of this plutonium plant began at Trombay on 27 March 1961 and on January 22, 1965 the Plutonium Plant was inaugurated.<sup>42</sup>

Establishments for Atomic Energy in India (published by the Department of Atomic Energy, Govt. of India) -

<http://www.idsa.in/npihp/documents/IDSA-DAE-Energy.pdf>

The nuclear program began to mature in 1960 and Nehru allegedly made critical decision to carefully put nuclear program on military production. During the same time, Nehru held discussions with American firm, the Westinghouse Electric, to construct the country's first nuclear power plant in Tarapur, Maharashtra.

In 1962, the nuclear program continued to develop, but at a slow rate. Nehru was distracted by the Sino-Indian War<sup>43</sup>, where India lost the war and territory to China. Nehru turned to the Soviet Union for help but it itself was facing the missile crisis.<sup>44</sup> The Soviet Politburo (A policy making committee of the communist party in the Soviet Union) turned down Nehru's request for conventional weapons supply and continued backing the Chinese.<sup>45</sup> This war left an impression on India that the Soviet Union was an unreliable ally. Therefore nuclear deterrence was felt necessary. Design work began in 1965 under Bhabha and proceeded by Raja Ramanna<sup>46</sup>, who took over the program after former's death.

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<sup>40</sup> <http://www.nci.org/06nci/04/Canada-India%20CIRUS%20agreement.htm> (Canada-India CIRUS agreement requiring use of the reactor and any products (plutonium) for "peaceful purposes only." April 28, 1956)

<sup>41</sup> <http://barc.gov.in/reactor/index.html> | Read the Section about the CIRUS Reactor

<sup>42</sup> <http://www.barc.gov.in/about/milestones.html> | Milestones of DAE

<sup>43</sup> [http://en.wikipedia.org/wiki/Sino-Indian\\_War](http://en.wikipedia.org/wiki/Sino-Indian_War) | Wikipedia

<sup>44</sup> [http://en.wikipedia.org/wiki/Cuban\\_Missile\\_Crisis](http://en.wikipedia.org/wiki/Cuban_Missile_Crisis) | Wikipedia

<sup>45</sup> <https://archive.org/stream/indorussianmilit00conl#page/n3/mode/2up> | Thesis on Indo-Soviet Relations during the Cold War Era

<sup>46</sup> <http://dae.nic.in/?q=node/223> | Raja Ramanna; DAE

Bhabha now was aggressively lobbying for the nuclear weapons and made several speeches on Indian radio. In 1964, Bhabha told the Indian public via India radio that "such nuclear weapons are remarkably cheap", and supported his arguments by relating the economic cost of American *nuclear testing program (Plowshare)*.<sup>47</sup> However the "*Nuclear Weapon Archive*" noted that the real cost to India for any nuclear program would be orders of magnitude greater than Bhabha's claims.<sup>48</sup>

The nuclear program was partially slowed down when Lal Bahadur Shastri became the prime minister, who had low ambitions regarding the nuclear program. In 1965, India faced another war, this time with West Pakistan (now Pakistan)<sup>49</sup>. Shastri appointed physicist Vikram Sarabhai<sup>50</sup> as the head of nuclear program, but because of his Gandhian beliefs, Sarabhai focused the program to be developed into more peaceful purposes rather than the militarization of the program.

### 1967-1972

In 1967, when Indira Gandhi became the prime minister, the work on nuclear program resumed with a new attitude and goals. Homi Sethna<sup>51</sup>, a chemical engineer, played a significant role in the development of weapon-grade plutonium while Raja Ramanna designed and manufactured the whole nuclear device. Because of the sensitivity, the first nuclear bomb project did not employ more than 75 scientists. The nuclear weapons program was now directed towards plutonium rather than uranium.

In 1968–69, P.K. Iyengar<sup>52</sup> visited the Soviet Union with three other colleagues and toured the nuclear research facilities at Dubna, Russia. During his visit, Iyengar was impressed by the plutonium fueled pulsed fast reactor. Upon his return to India, Iyengar set about developing plutonium reactors and the Indian political leadership approved the plan in January 1969. The secret plutonium plant was known as PURNIMA-1 and construction took place in March 1969. The plant's leadership included the roles of Iyengar, Raja Ramanna, Homi Sethna, and Sarabhai. Sarabhai's presence clearly indicates that with or without formal approval, the work on nuclear weapons at Trombay was commenced. On 18th May 1972, Research Reactor PURNIMA-I attained criticality.<sup>53</sup>

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<sup>47</sup> [http://en.wikipedia.org/wiki/Operation\\_Plowshare](http://en.wikipedia.org/wiki/Operation_Plowshare) | Wikipedia

<sup>48</sup> <http://nuclearweaponarchive.org/India/IndiaWDevelop.html> | Nuclear Weapon's Archive

<sup>49</sup> [http://en.wikipedia.org/wiki/Indo-Pakistani\\_War\\_of\\_1965](http://en.wikipedia.org/wiki/Indo-Pakistani_War_of_1965) | Wikipedia

Also see USA's position on the same at <https://history.state.gov/milestones/1961-1968/india-pakistan-war>

<sup>50</sup> <http://www.vigyanprasar.gov.in/scientists/Vikram%20Sarabhai.htm> | About Vikram Sarabhai

<sup>51</sup> <http://www.barc.gov.in/leaders/sethna.html> | Dr. Homi S. Sethna

<sup>52</sup> [http://en.wikipedia.org/wiki/P.\\_K.\\_Iyengar](http://en.wikipedia.org/wiki/P._K._Iyengar) | Wikipedia

<sup>53</sup> <http://barc.gov.in/reactor/index.html> | PURNIMA - I Reactor Details

## 1972-1974: First Nuclear Test (*Smiling Buddha* or POKHRAN - 1)

India continued to harbor uncertain feelings about nuclear weapons and accord low priority to their production until the Indo-Pakistani War of 1971.<sup>54</sup>

In the same month of December 1971, when U.S. President Richard Nixon sent a carrier battle group led by the USS *Enterprise* (CVN-65) into the Bay of Bengal in an attempt to intimidate India during the war, the Soviet Union which shared a special relationship with India responded by sending a submarine armed with nuclear missiles from Vladivostok to trail the US task force. The Soviet response demonstrated the deterrent value and significance of nuclear weapons and ballistic missile submarines to Indira Gandhi. India had gained the military and political momentum on Pakistan after acceding to the treaty that divided Pakistan into two different political entities (Formation of Bangladesh) in the South Asia.<sup>55</sup>

On 7 September 1972, near the peak of her post-war popularity, Indira Gandhi authorized the Bhabha Atomic Research Centre (BARC) to manufacture a nuclear device and prepare it for a test. Throughout its development, the device was formally called the "Peaceful Nuclear Explosive", but it was usually referred to as the *Smiling Buddha*.

Detonation (widely regarded as nuclear weapon test) occurred on 18 May 1974, Buddha Jayanti (a festival day in India marking the birth of Gautama Buddha). The device was detonated by the in the long-constructed army base, Pokhran Test Range, at the Pokhran municipality, Rajasthan state. Historical accounts found out that Indian political leadership, under Indira Gandhi, remained the tight control of all aspects of the preparations of the *Smiling Buddha*. This test was kept in extreme secrecy. Officially, Indian Ministry of External Affairs (MEA) maintained that the test was a peaceful nuclear explosion.

"(...) The Pokhran test was a bomb, I can tell you now.... An explosion is an explosion, a gun is a gun, whether you shoot at someone or shoot at the ground.... I just want to make clear that the test was not all that peaceful...."

- Raja Ramanna 1997, giving interview to Press Trust of India in 1997.

Nuclear Weapons Archive,  
<http://nuclearweaponarchive.org/India/IndiaSmiling.html>

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<sup>54</sup> [http://en.wikipedia.org/wiki/Indo-Pakistani\\_War\\_of\\_1971](http://en.wikipedia.org/wiki/Indo-Pakistani_War_of_1971) | Wikipedia

Also read upon the role of other countries in the War, <http://www.theworldreporter.com/2011/10/1971-india-pakistan-war-role-of-russia.html>

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[http://in.rbth.com/articles/2011/12/20/1971\\_war\\_how\\_russia\\_sank\\_nixons\\_gunboat\\_diplomacy\\_14041.html](http://in.rbth.com/articles/2011/12/20/1971_war_how_russia_sank_nixons_gunboat_diplomacy_14041.html)

## Post-Smiling Buddha

After the formation of the Nuclear Suppliers Group (NSG)<sup>56</sup>, India's nuclear program was severely affected as an impact of the test in 1974. The world's major nuclear powers imposed nuclear embargo on both India and Pakistan (which was technologically racing to meet with India's challenge). After the Pokhran-I, the nuclear program had struggled for years to gain credibility and its progress crippled by the lack of indigenous resources and dependent on imported technology and technical assistance.<sup>57</sup> Although, Indira Gandhi declared that India's nuclear program was not militarizing, on the other hand, she did authorize preliminary work on developing a fusion boosted fission design. But, after the 1975 state emergency and the ouster of Indira Gandhi in 1977, the nuclear program was left with a vacuum of leadership and even basic management. The new group was set up to work on the fusion boosted design headed by M. Srinivasan<sup>58</sup>, but the progress was slow.

Indian peace activist and anti-nuclear weapon advocate, Morarji Desai, took over the office as Prime Minister. On June 1978, Desai removed Ramanna from the nuclear program and posted him at the Ministry of Defence. His government was not entirely without progress in nuclear program and had the program continued to be grow at a desirable rate. Disturbing news for India came from Pakistan when the world discovered the Pakistan's clandestine atomic bomb projects.

In contrast to India's nuclear program, Pakistan's atomic bomb program was under the military guidance with civilian scientists were left in charge of every scientific nature of the program. Pakistan's atomic bomb program was extremely huge, lavishly funded, well administratively organized; India soon realized that Pakistan was likely to succeed in its project in matter of two years. The 1980 general elections marked the return of Indira Gandhi who restarted the nuclear program. In 1981, Ramanna was returned as a director of the nuclear program and accelerated the program. In 1983–85, Indira Gandhi denied the nuclear test option as she saw Pakistan began exercising the *Brinkmanship*, though the nuclear program continued to advance.

It was the 1980s that the work on hydrogen bombs and the missile program was initiated, and Dr. Abdul Kalam, an aerospace engineer who developed the launch vehicles for ISRO, was made the director of the missile program.<sup>59</sup>

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<sup>56</sup> <http://www.nuclearsuppliersgroup.org/en/history1> | History of the NSG

<sup>57</sup> [http://www.fes.de/ipg/inhalt\\_d/pdf/Meier\\_GB.pdf](http://www.fes.de/ipg/inhalt_d/pdf/Meier_GB.pdf) | From Pg. 2

<sup>58</sup> [people.du.ac.in/~sm/smweb/.../From%20Fission%20to%20Fusion.doc](http://people.du.ac.in/~sm/smweb/.../From%20Fission%20to%20Fusion.doc)

<sup>59</sup> <http://www.abdulkalam.nic.in/profile.html> | Dr. A.P.J. Abdul Kalam's Profile

### **1988–1998: Political Momentum**

The BJP had down played the relationship with the Prime Minister Benazir Bhutto who came in power after the 1988 general elections. India's relations with Pakistan were severed, when India began accusing Pakistan supporting the Insurgency in Indian Kashmir.

On 18 March 1989, India launched the missile program which led the successful development of the Prithvi missiles. Successive governments in India decided to observe this temporary moratorium for fear of inviting international criticism.

In 1995, Prime Minister P.V. Narasimha Rao decided to carry out further tests. But the plans were halted after American satellites picked up signs of preparations for testing at Pokhran. The Americans under President Bill Clinton exerted enormous pressure on Rao to stop the preparations. Responding to India, Prime Minister Benazir Bhutto issued harsh and severe statements against India on Pakistan's news channels, thus stressing further the relationship between two countries. Tension between two countries began to arise when Benazir Bhutto intensified her policy on Kashmir in 1995.

### **1998 Indian general elections**

The right-wing conservative alliance, led by BJP, came to power in 1998 general elections with an exclusive public mandate. BJP's political might had been growing steadily in strength over the past decade, riding on a wave of ethnic-religious politics advocating Hindu-based nationalism. The alliance had consisted of right-wing populist parties, including the VHP and RSS, which had been widely believed to be involved in promoting religious separatism through agitations after the demolition of 16th century Babri Mosque in Ayodhya, UP State. It was an event which also caused tensions with Pakistan.

In Pakistan, the similar conservative force, the Pakistan Muslim League (PML), was also in power with an exclusive mandate which was led by Prime Minister Nawaz Sharif who defeated the left-wing forces led by Benazir Bhutto in 1997 general elections.

During the BJP campaign, Atal Bihari Vajpayee indulged in grandstanding— like when he declared on 25 February that his government would "take back that part of Kashmir that is under Pakistan's control." Before this declaration, the BJP platform had clear intention to "exercise the option to induct nuclear weapons" and "India should become an openly nuclear power to garner the respect on the world stage that India deserved." By 18 March 1998, Vajpayee had publicly begun his lobbying for nuclear explosion and declared that "there is no compromise on national security; all options including the nuclear options will be exercise to protect security and sovereignty."

In the month of March and after the premiership inauguration of Vajpayee, the Prime Minister Vajpayee began consulting Abdul Kalam, R. Chidambaram and officials of the

Indian DAE on nuclear options. Chidambaram briefed Vajpayee extensively on the nuclear program; Kalam presented the status of the missile program.

On 28 March 1998, The Atal Bihari Vajpayee administration asked the scientists to make preparations in the shortest time possible, and preparations were hastily made. It was time of tense atmosphere with Pakistan's missile and nuclear program taking leaps. On 6 April and the momentum in India for nuclear tests began to build up which strengthened Vajpayee's position to order the tests.

### **Events in May 1998: Second Nuclear Test (*Operation Shakti* or POKHRAN - II)**

On 11 May 1998, *Operation Shakti* (POKHRAN-II) was initiated at the Indian Army's Pokhran Test Range with the detonation of one fusion and three fission bombs. On 13 May 1998, two additional fission devices were detonated and the Indian government led by prime minister Atal Bihari Vajpayee shortly convened a press conference to declare India a full-fledged nuclear state.<sup>60</sup>

Many names are attributed to these tests; originally they were called *Operation Shakti-98* (*Power-98*), and the five nuclear bombs were designated *Shakti-I* through *Shakti-V*.

#### **Links for Further Research on the Indian Nuclear Programme**

- Some very important Letters and Communication can be found on <http://www.idsa.in/npihp/document.html> for an in-depth research of certain portions of the development of nuclear energy in India.
- [\*India's Atomic Energy Programme: Claims and Reality\*](#) by Suvrat Raju
- [\*Indian nuclear power programme – Past, present and future\*](#) by S. A. Bhardwaj
- [\*Myth and Reality of Nehru's Nuclear Policy\*](#) at International Journal of Innovative Research and Studies
- [\*Nehru, Science and Secrecy\*](#) by M.V. Ramanna
- [\*The Atomic Energy Act of 1962\*](#) that replaced the Atomic Energy Act of 1948
- [\*Milestones of the Department of Atomic Energy\*](#), Government of India
- [\*India's Nuclear Policy\*](#) by Rajesh Rajagopalan

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<sup>60</sup> <http://nuclearweaponarchive.org/India/Indianofficial.txt> | Ministry of External Affairs, Government of India



## Pakistan's Nuclear Programme

### Background

In 1947, British India was separated into the Muslim state of Pakistan (with West and East sections) and the largely Hindu India. Pakistan's geostrategic position next to Communist China combined with the anti-communist attitude of its military made it a natural ally for the United States, and Pakistan joined a number of US-sponsored alliances in return for US military and economic assistance. Pakistan's relationship with neighboring India remained in conflict, however. The states fought two wars over the disputed Kashmir territory – in 1947-48 and 1965. A third war in 1971 resulted in East Pakistan becoming the separate nation of Bangladesh.<sup>61</sup>

Pakistan uneasy relationship with India, Afghanistan and the former Soviet Union explains and the energy shortage explains its policy to become a nuclear power as part of its defense strategy.<sup>62</sup> On 8 December 1953, Pakistan media welcomed the U.S. Atoms for Peace initiatives, followed by the establishment of Pakistan Atomic Energy Commission in 1956. In 1953, Foreign minister Sir Zafarullah Khan publicly stated that "Pakistan does not have a policy towards the atom bombs". Following the announcement, on 11 August 1955, the United States and Pakistan reached an understanding concerning the peaceful and industrial use of nuclear energy which also includes a \$350,000 worth pool-type reactor. Before 1971, Pakistan's nuclear development was peaceful but an effective deterrent against India, as Benazir Bhutto maintained in 1995. Pakistan followed a strict non-nuclear weapon policy from 1956 until 1971, and major proposals were made in the 1960s by several officials and senior scientists, but PAEC under its chairman Ishrat Hussain Usmani made no efforts to acquire nuclear fuel cycle for the purposes of active nuclear weapons programme.

After Indo-Pak war of 1965, the country put efforts to launch a classified and clandestine atomic bomb project to counter the Indian nuclear project underway. Shortly after the war, the country acquired its first research reactor, PARR-I, from the United States.

In 1969, after successfully negotiating with the United Kingdom Atomic Energy Authority (UKAEA), Pakistan acquired nuclear fuel reprocessing site capable of extracting 360g of weapons-grade plutonium annually. The Pakistan Atomic Energy Commission (PAEC) chose five top scientists to receive training to gain expertise in nuclear fuel cycle as well as weapons-grade and reactor-grade plutonium. Agreements were made with Canada, France

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<sup>61</sup> [http://charnysh.net/Documents/charnysh\\_pakistan\\_analysis.pdf](http://charnysh.net/Documents/charnysh_pakistan_analysis.pdf) | Volha Charnysh, |Nuclear Age Peace Foundation

<sup>62</sup>

<https://dl.dropboxusercontent.com/spa/zohk0i282t94/Area%20Studies/public/SouthAsia/SAserials/Dawn/1995/20Apr95.html#ndet>

and the British consortium companies to expand the nuclear power infrastructure as part of Pakistan's peaceful nuclear policy.

### **1971-1998: Third Indo-Pak war and atomic bomb projects**

The main turning point in Pakistan's decision-making was the 1971 war with India which led the loss of provisional state, East-Pakistan, which was succeeded as Bangladesh.<sup>63</sup> The war left deep scars in Pakistan's civil society as well as leaving the political and military in misery. The 1971 war was an unforgettable experience and lesson to political and military establishment. For Pakistan, it was a decisive psychological setback. Pakistan lost its territory, a significant portion of its economy and its influential geo-political role in South Asia. At foreign fronts, Pakistan failed to gather any moral and foreign support even from her long-standing allies, particularly the United States, Turkey and the People's Republic of China. Since the Partition, the physical existence Pakistan seemed to be in great mortal danger and quite obviously could rely on no one.

The war played a crucial and groundbreaking role in the hearts of top scientists of the country who witnessed the war and control of remaining parts of the country was given to Zulfikar Ali Bhutto as country's elected Prime minister. Roughly two weeks after the war, Zulfikar Ali Bhutto allegedly called for a secret meeting of top and senior scientists in Multan on 20 January 1972 (which later elevated as "*Multan meeting*"). There, Zulfikar Bhutto authorized, initiated, and orchestrated the scientific research on atomic weapons bringing the entire nuclear infrastructure under one chain of command. Zulfikar Ali Bhutto, who was concerned with Indian nuclear efforts, made extremely critical decisions and aggressively supervised the policy implementation of the atomic bomb project.<sup>64</sup>

In 1972, Bhutto appointed Abdus Salam<sup>65</sup> as his science adviser and at same time, called nuclear engineer Munir Ahmad Khan from International Atomic Energy Agency (IAEA) to lead the program administratively while Bhutto controlled the program as the political administrative figure.

On November 1972, Bhutto assisted by Salam and Munir Khan, inaugurated the first commercial nuclear power plant, Kanupp-I in Karachi, Sindh Province.<sup>66</sup> Along with Prof. Salam and Munir Ahmad Khan<sup>67</sup>, the diameter of scientific research was expanded throughout the country.

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<sup>63</sup> [http://en.wikipedia.org/wiki/Indo-Pakistani\\_War\\_of\\_1971](http://en.wikipedia.org/wiki/Indo-Pakistani_War_of_1971) | Wikipedia

<sup>64</sup> <http://defence.pk/threads/the-comprehensive-story-of-pakistan-nuclear-program.2314/> | Search for the paragraph on the Multan Meeting of 1972

<sup>65</sup> [http://en.wikipedia.org/wiki/Abdus\\_Salam#Nuclear\\_weapons\\_programme](http://en.wikipedia.org/wiki/Abdus_Salam#Nuclear_weapons_programme) | Wikipedia

<sup>66</sup> <http://www.nti.org/facilities/111/> | Nuclear Threat Initiative

Also read details of the same by IAEA

<http://www-pub.iaea.org/MTCD/Publications/PDF/cnpp2009/countryprofiles/Pakistan/Pakistan2006.htm>

<sup>67</sup> <http://pakdef.org/munir-ahmad-khan-memorial-reference/>

In PAEC, Salam established research divisions and groups that took charge to carry out the physics and mathematical calculations regarding to the development of the potential weapon. The atomic bomb project at an early stage was directed by Abdus Salam as he was the founding director of Theoretical Physics Group (denoted as TPG) and the Mathematical Physics Group (denoted as MPG) at the PAEC to conduct mathematical and physics calculations regarding the fission devices.

On March 1974, the researches on physical developments were initiated by Munir Khan and Abdus Salam after chairing a meeting in Pinstech Institute. At this meeting the word "bomb" was never used but the participants fully understood the nature of the work. This laid the foundation of "Wah Group Scientist" (denoted as WGS) with U.S. educated mechanical engineer Hafeez Qureshi<sup>68</sup> as director-general. During the same time, a new Directorate of Technical Development (DTD) was set up to coordinate work on the various specialized groups working in PAEC on the design, development, and testing of nuclear weapons under chemical engineer Dr. Shaikh Zaman. The far more complex assembly methods of implosion-bomb design was favored over the relatively simple gun-type method, and the productions of reactor and weapon-grade and separation of weapon-grade plutonium isotopes were massive undertakings by the PAEC. The government never released the details of the technical aspects of the tested weapons as a public domain due to its sensitivity.

The atomic bomb project was accelerated on May 1974 after India surprising Pakistan and the rest of the world after announcing the first explosion of nuclear device, *Smiling Buddha* in Pokhran Test Range of Indian Army. The goal to develop the atomic bombs became impetus after launching the uranium enrichment project, the *Kahuta Project*.<sup>69</sup>

The Pakistan Atomic Energy Commission, headed by Munir Ahmad Khan, focused on the plutonium route to nuclear weapons development using material from the safeguarded Karachi Nuclear Power Plant (KANUPP), but its progress was inefficient due to the constraints imposed by the nuclear export controls applied in the wake of India's nuclear test. Around 1975, A.Q. Khan<sup>70</sup>, a metallurgist working at a subsidiary of the URENCO enrichment corporation in the Netherlands, directed a letter through the Pakistani Embassy in The Hague to offer his expertise, and officially joined the atomic bomb project in 1976. Having brought centrifuge designs and business contacts back with him to Pakistan, Khan used various tactics, such as buying individual components rather than complete units, to evade export controls and acquire the necessary equipment. The Corps of Engineers under directorship of the General Zahid Ali Akbar built the Engineering

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and [http://en.wikipedia.org/wiki/Munir\\_Ahmad\\_Khan](http://en.wikipedia.org/wiki/Munir_Ahmad_Khan) | Wikipedia

<sup>68</sup> [http://en.wikipedia.org/wiki/Muhammad\\_Hafeez\\_Qureshi](http://en.wikipedia.org/wiki/Muhammad_Hafeez_Qureshi) | Wikipedia

<sup>69</sup> [http://en.wikipedia.org/wiki/Project-706#The\\_Building\\_of\\_the\\_Kahuta\\_Project](http://en.wikipedia.org/wiki/Project-706#The_Building_of_the_Kahuta_Project) | Wikipedia

<sup>70</sup> <http://www.globalsecurity.org/wmd/world/pakistan/khan.htm> | Global Security

Research Laboratories (ERL) for that purpose and situated Abdul Qadeer Khan and his team at ERL for commercial and weapon-grade uranium enrichment. By the early 1980s, Pakistan had a clandestine uranium enrichment facility, and A.Q. Khan would later assert that the country had acquired the capability to assemble a first-generation nuclear device as early as 1984.

Pakistan also received assistance from states, especially China. Beginning in the late 1970s Beijing provided Islamabad with various levels of nuclear and missile-related assistance, including centrifuge equipment, warhead designs, HEU, components of various missile systems, and technical expertise. Eventually, from the 1980s onwards, the Khan network diversified its activities and illicitly transferred nuclear technology and expertise to Iran, North Korea, and Libya.

Finally in 1978, weapon designing and calculations were completed and a milestone in isotope separation was reached by the PAEC. In 1981, the physical development of the atomic bomb project was completed and the ERL successfully enriched the uranium above 5% and produces first batch of HEU fuel rods. On 11 March 1983, a milestone was achieved when PAEC led by Munir Ahmad Khan carried out the first cold test of a working nuclear device, codename Kirana-I. This was followed by 24 more cold tests by PAEC in which different weapon designs were tested and improved.

On 6 April 1998, Pakistan conducted its first test of the Ghauri. Pakistani media reports credited the missile with an 1100 km test flight and an apogee of 350 km, but information on the impact point shows that the flight distance was no more than 800 km. The system had a claimed range of 1500 km. While Pakistan has stated publicly that the missile was designed and produced indigenously it was, in fact, a North Korea produced No-dong. This was the second test of a No-dong, and it is believed that DPRK observers were present.<sup>71</sup> Although this test did not actually influence India's preparations for the tests held 5 weeks later, it did help create the atmosphere of tension in which the tests were conducted.

### **Events in May 1998: Nuclear Test (Chagai-I & Chagai-II)**

In the afternoon of Monday, 11 May 1998 Indian Prime Minister Atal Bihari Vajpayee stunned the world by announcing at a hurriedly convened press conference that earlier that day India had conducted three nuclear tests. International observers were, if anything, even more astonished by the announcement two days later that two additional tests had been conducted. India's test created an untenable situation for Prime Minister Mohammad Nawaz Sharif. In the wake of India's tests, Pakistan felt an urgent need to demonstrate its own prowess in a similar manner for many reasons - to deny India unilateral technical advantage it might have gained from conducting tests; to restore a sense of a balance-of-

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<sup>71</sup> <http://cns.miis.edu/opapers/op2/op2.pdf> | *A History of Ballistic Missile Development in the DPRK* by Joseph S. Bermudez Jr.

power with India in the eyes of itself, India, and the world; et cetera. Pressure for test spanned the political spectrum from liberals like opposition leader Benazir Bhutto to the religious right. Bhutto reportedly went so far as to declare that "if there is military capability to eliminate India's nuclear capacity, it should be used." Conservatives within the Sharif administration, particularly Foreign Minister Gohar Ayub Khan pressed very hard for tests. And the Pakistani military, the true seat of power in Pakistan and the actual authority over its nuclear weapons, had been eager to conduct tests for years. Sharif thus faced unbearable pressure to authorize its own nuclear test series.

The day after the first tests Ayub Khan said the Asian subcontinent has been thrust into a nuclear arms race and indicated that Pakistan was ready to conduct a nuclear test of its own. "We are prepared to match India, we have the capability ... We in Pakistan will maintain a balance with India in all fields," he said in an interview. "We are in a headlong arms race on the subcontinent."

Prime Minister Sharif was much more subdued, refusing to say whether a test would be conducted in response: "We are watching the situation and we will take appropriate action with regard to our security," he said.

After returning to the country from a trip to Central Asia on 13 May, Sharif met for several hours with senior military officials and senior members of his government to discuss India's action, which appeared to have taken Pakistan's security establishment by surprise. "We didn't have any advance information on these explosions," said a member of Sharif's cabinet.

Another cabinet member said, "Not surprisingly, many ministers thought it was the ideal moment for Pakistan to test its nuclear device," and Pakistan's army informed Sharif that it will be ready "within a week" to conduct an underground nuclear test on 24 hours' notice. But officials familiar to the deliberations spoke of a division within the cabinet over an appropriate Pakistani response.

Read the story behind the initial cabinet meeting at which Pakistan's response to the Indian tests was considered.

[When Mountains Move - The Story of Chagai](#) by Rai Muhammad Saleh Azam

According to an aide, Sharif appeared to favor "a balanced and moderate response" and ordered a report on the cost the country would have to bear if a Pakistani nuclear test brought international sanctions. The same day President Clinton telephoned Sharif and urged him not to go ahead with a test, asking him "not to respond to an irresponsible act in kind."

A meeting of the Defence Committee of the Cabinet (DCC) was convened on the morning of 15 May 1998 at the Prime Minister's Secretariat, Islamabad to discuss the situation arising out of the Indian nuclear tests. The meeting was chaired by the Prime Minister of Pakistan and attended by the Minister of Defence, the Minister of Foreign Affairs, Gohar Ayub Khan, the Minister of Finance & Economic Affairs, Sartaj Aziz, the Foreign Secretary, Shamshad Ahmed Khan and the three Chiefs of Staffs of the Army, Air Force and Navy, namely General Jehangir Karamat, Air Chief Marshal Pervaiz Mehdi Qureshi and Admiral Fasih Bokhari respectively.

Since Dr. Ishfaq Ahmed, Chairman of the PAEC was on a visit to the United States and Canada the responsibility of giving a technical assessment of the Indian nuclear tests and Pakistan's preparedness to give a matching response to India fell on the shoulders of Dr. Samar Mubarakmand, Member (Technical), PAEC. Dr. Mubarakmand was in charge of the PAEC's Directorate of Technical Development (DTD), one of the most secretive organizations in the Pakistan nuclear programme the location of which is one of Pakistan's best kept secrets and unknown to the world. Dr. Mubarakmand had supervised several cold tests since 1983 and was responsible for overseeing all of PAEC's classified projects. Also, in attendance was Dr. A.Q. Khan, Director of the Khan Research Laboratories (KRL), Kahuta.

There were two points on the DCC's agenda: Firstly, whether or not Pakistan should carry out nuclear tests in order to respond to Indian's nuclear tests? Secondly, if Pakistan does go ahead with the tests then which of the two organizations, PAEC or KRL, should carry out the tests?

The discussions went on for a few hours and encompassed the financial, diplomatic, military, strategic and national security concerns. Finance Minister Sartaj Aziz was the only person who opposed the tests on financial grounds due to the economic recession, the low foreign exchange reserves of the country and the effect of inevitable economic sanctions which would be imposed on Pakistan if it carried out the tests. Prime Minister Nawaz Sharif neither opposed nor proposed the tests. The remainder spoke in favour of conducting the tests.

Dr. Mubarakmand gave a technical assessment on behalf of the PAEC of India's tests. Unsurprisingly, given the outside skepticism about India's test claims and India and Pakistan's mutual habit of denigrating each other's ability, his assessment was that there had been only one successful test on 11 May, and if a thermonuclear device had been fired then it had been a failure. Mubarakmand added that if it is decided that Pakistan should go ahead with nuclear tests of its own, then the PAEC is fully prepared to carry out the nuclear tests within 10 days.

By week's end American spy satellites had detected an influx of equipment at a previously prepared test site in the Chagai Hills in the desert of southwestern Baluchistan province, barely 50 km from the border with Iran, and the CIA was predicting that a test could occur as early as Sunday 17 May.

Over the weekend Sharif consulted with various parties and factions, and remained under enormous pressure to test. Meanwhile public reaction continued to favor an immediate response. Former PM Benazir Bhutto advocated not only an immediate nuclear test by Pakistan, but also asserted that India should be disarmed by a preemptive attack, and called on Sharif to resign.

The tension was ratcheted up on Saturday by Ayub Khan, known to be a hard-liner with close ties to the military, when he remarked to reporters that a nuclear test by Pakistan "is just a matter of timing and the government of Pakistan will choose as to when to conduct the test." "A nuclear test by Pakistan is certain," he added.

Ayub Khan repeated the remarks the next day, telling The Associated Press that Pakistan has decided to go ahead with a test of a nuclear device. "It's a matter of when, not if, Pakistan will test," he said. "The decision has already been taken by Cabinet," he said in a telephone interview from his rural home in northwestern Pakistan.

The frenzy of speculation reached a peak on Sunday, 17 May, when the nuclear device was believed to be in place for a test. There was even a brief flurry of excitement caused by a false alarm on Sunday when German President Helmut Kohl said he had "reliable information" saying Pakistan had exploded a bomb, a report that was quickly denied and discredited.

Since the DCC meeting of 15 May 1998 proved inconclusive, it is believed that a more exclusive DCC meeting was held on 16 or 17 May 1998 attended only by the Prime Minister, the Foreign Minister, the Finance Minister and the three Chiefs of Staff of the Army, Air Force and Navy. This meeting has never been officially acknowledged but it must have been held as neither the Prime Minister alone nor the Chief of the Army Staff alone, could have made the decision to conduct the nuclear tests. The DCC was the only competent authority to decide on this matter, especially since the National Command Authority (NCA), Pakistan's nuclear command and control authority for its strategic forces, did not exist at that time. In this meeting, the two agenda points of the DCC meeting of 15 May 1998 were decided. Firstly, Pakistan would give a matching and befitting response to India by conducting nuclear tests of its own. Secondly, the task would be assigned to the Pakistan Atomic Energy Commission (PAEC), who was the best equipped and most experienced to carry out the tests.

Meanwhile the US worked on putting together an incentive package to Pakistan to persuade it not to test. The repeal of the Pressler amendment that cut off military aid was offered, as was delivery of \$600 million dollars' worth of F-16 fighter-bombers that Pakistan had ordered and paid for but never received. Discussions also began on how much aid to offer Pakistan on top of these concessions. The automatic imposition of a nearly complete embargo like that imposed on India, but which much smaller Pakistan could hardly afford, provided the penalty side of the equation.

But PM Sharif did not confirm the comments by Ayub, and by the beginning of the next week, Pakistan appeared to have backed off any immediate decision to test, and was content to see how much in aid the US might offer in return.

But out of the public eye things were moving rapidly in a different direction. On 18 May 1998, the Chairman of the PAEC was again summoned to the Prime Minister House where he was relayed the decision of the DCC. "Dhamaka kar dein" (Conduct the explosion) were the exact words used by the Prime Minister to inform him of the Government's decision to conduct the nuclear tests. The PAEC Chairman went back to his office and gave orders to his staff to prepare for the tests. Simultaneously, GHQ and Air Headquarters issued orders to the relevant quarters in 12 Corps, Quetta, the National Logistics Cell (NLC), the Army Aviation Corps and No. 6 (Air Transport Support) Squadron respectively to extend the necessary support to the PAEC in this regard. The Civil Aviation Authority (CAA) also directed the national airline, PIA, to make available a Boeing 737 passenger aircraft at short notice for the ferrying of PAEC officials, scientists, engineers and technicians to Baluchistan.

On 19 May 1998, two teams of 140 PAEC scientists, engineers and technicians left for Chagai, Baluchistan on two separate PIA Boeing 737 flights. Also on board were teams from the Wah Group, the Theoretical Group, the Directorate of Technical Development (DTD) and the Diagnostics Group. Some of the men and equipment were transported via road using NLC trucks escorted by the members of the Special Services Group (SSG), the elite commando force of the Pakistan Army.

The nuclear devices - in sub-assembly form - were flown from Rawalpindi to a designated airfield in Baluchistan on a Pakistan Air Force (PAF) C-130 Hercules transport aircraft (it is curious that so many would all be entrusted to a single aircraft though). Four PAF F-16s armed with air-to-air missiles provided escort, with secret orders to shoot the C-130 down if it tried to fly out of Pakistani airspace. The F-16s were ordered to keep their radio communications equipment turned off so that no orders, in the interim, could be conveyed to them to act otherwise. They were also ordered to ignore any orders to the contrary that got through to them during the duration of the flight even if such orders originated from Air Headquarters.



The nuclear devices were assembled separately at the test site in individual assembly rooms ("zero rooms") located along the one kilometer tunnel under the mountain Koh Kambaran in the Ras Koh range. Azam states that Samar Mubarakmand personally supervised the complete assembly of all five nuclear devices (implying a very lengthy assembly process since it would have to be sequential, probably lasting more than a day). Diagnostic cables were then laid through the tunnel, and out of the tunnel to the telemetry station which communicated with the command/observation post 10 km away. Afterwards, a complete simulated test was carried out by tele-command. This process of preparing the nuclear devices and laying of the cables and the establishment of the fully functional command and observation post took 5 days (i.e. until about 24 May).

On 25 May it was reported by the Associated Press and Reuters that U.S. intelligence officials had said that Pakistani preparations had accelerated in recent days at a site called Raskoh in the Chagai Hills (it later transpired that Ras Koh was indeed the test area, but Ras Koh is a separate mountainous area over 40 km from the Chagai Hills area). Tunneling activities and the setup of explosive monitoring equipment had been observed. "At this point, they could conduct a nuclear test at any time," said one official.

At the same time it had become increasingly likely that any U.S. aid package would fall short of Pakistani expectations. The major inducements suggested at this point - the delivery of 28 F-16s that Pakistan has already paid for and was promised by President Clinton two years ago anyway, and the rescheduling of loans - was not very tempting. Pakistan seemed to be after explicit U.S. security guarantees, something that was unlikely to be offered.

The test tunnel was sealed by the Pakistan Army 5 Corp on 25 May with the assistance and supervision of the Pakistan Army Engineering Corps, the Frontier Works Organization (FWO) and the Special Development Works (SDW) - a military unit created 20 years earlier specifically to carry out field engineering for nuclear tests. Mubarakmand is said to have walked a total of 5 kilometers along the stuffy tunnels checking and rechecking the devices and the cables before the cables were finally plugged into the nuclear devices. Sealing the tunnel consumed 6,000 bags of cement and was completed by the afternoon of 26 May 1998. 24 hours later the cement had set in the desert heat, and the engineers certified that the site was ready. The fact the tests were ready was relayed to the Prime Minister via General Headquarters.

Late in the day on 27 May the U.S. government reported that Pakistan had been observed pouring cement in a test shaft in the Chagai Hills. This indicated that nuclear test devices were being sealed in, which is the final necessary step before conducting nuclear tests. Officials then predicted that tests could occur within hours.

President Bill Clinton made a last-minute plea to Sharif, Wednesday night. According to presidential spokesman Mike McCurry it was a "very intense" 25-minute call in which the president implored the prime minister not to conduct a test. It was the fourth presidential call to Sharif since India's first explosion on May 11. But the test time had been set - 3:00 p.m. in the afternoon of 28 May 1998.

After decades of covertly building and developing the atomic weapons program and the related atomic, Pakistan under the leadership of Prime Minister Nawaz Sharif, tested its five underground nuclear devices in Chagai Hills.

Chagai-I is the codename given to the five underground nuclear tests conducted by Pakistan at 1515 hrs. PST on 28 May 1998. The tests were performed at the Ras Koh Hills in the Chagai District of the Balochistan Province of Pakistan.

In the pre-dawn hours of 28 May Pakistan cut the communication links for all Pakistani seismic stations to the outside world. All military and strategic installations in Pakistan were put on alert, and the Pakistan Air Force F-16A and F-7MP air defense fighters were placed on strip alert - ready to begin their take-off roll at any moment.

Azam provides a detailed account of the events that day:

At Chagai, it was a clear day. Bright and sunny without a cloud in sight. All personnel, civil and military were evacuated from 'Ground Zero' except for members of the Diagnostics Group and the firing team. They had been involved in digging out and removing some equipment lying there since 1978.

Ten members of the team reached the Observation Post (OP) located 10-kilometres away from Ground Zero. The firing equipment was checked at 1:30 p.m. and prayers were offered. An hour later, at 2:30 p.m., a Pakistan Army helicopter carrying the team of observers including PAEC Chairman, Dr. Ishfaq Ahmed, KRL Director, Dr. A.Q. Khan, and four other scientists from KRL including Dr. Fakhr Hashmi, Dr. Javed Ashraf Mirza, Dr. M. Nasim Khan and S. Mansoor Ahmed arrived at the site. Also accompanying them was a Pakistan Army team headed by General Zulfikar Ali, Chief of the Combat Division.

At 3:00 p.m. a truck carrying the last of the personnel and soldiers involved in the site preparations passed by the OP. Soon afterwards, the all-clear was given to conduct the test as the site had been fully evacuated.

Amongst the 20 men present, one young man, Muhammad Arshad, the Chief Scientific Officer, who had designed the triggering mechanism, was selected to push the button. He was asked to recite "All praise be to Allah" and push the button. At exactly 3:16 p.m. the button was pushed and Muhammad Arshad stepped from obscurity into history.

As soon as the button was pushed, the control system was taken over by computer. The signal was passed through the air link initiating six steps in the firing sequence while at the same time bypassing, one after the other, each of the security systems put in place to prevent accidental detonation. Each step was confirmed by the computer, switching on power supplies for each stage. On the last leg of the sequence, the high voltage power supply responsible for detonating the nuclear devices was activated.

As the firing sequence passed through each level and shut down the safety switches and activating the power supply, each and every step was being recorded by the computer via the telemetry which is an apparatus for recording reading of an instrument and transmitting them via radio. A radiation-hardened television camera with special lenses recorded the outer surface of the mountain.

The voltage reached the triggers on all five devices simultaneously in all the explosive lenses with microsecond synchronization.

As the firing sequence continued through its stages, 20 pairs of eyes were glued on the mountain 10 kilometers away. There was deafening silence within and outside of the OP.

A short while after the button was pushed, the earth in and around the Ras Koh Hills trembled. The OP vibrated as smoke and dust burst out through the five points where the nuclear devices were located. The mountain shook and changed colour as the dust of thousands of years was dislodged from its surface. Its black granite rock turning white due to de-oxidization from the radioactive nuclear forces operating from within. A Huge cloud of beige dust then enveloped the mountain.

The time-frame, from the moment when the button was pushed to the moment the detonations inside the mountain took place, was thirty seconds. For those in the OP, watching in pin-drop silence with their eyes focused on the mountain, those thirty seconds were the longest in their lives. It was the culmination of a journey which started over 20 years ago. It was the moment of truth and triumph against heavy odds, trials and tribulations. At the end of those thirty seconds lay Pakistan's date with destiny.

The Pakistani Ministry of Foreign Affairs would later describe it as "Pakistan's finest hour". Pakistan had become the world's 7th nuclear power and the first nuclear weapons state in the Islamic World.

On 28 May, at 15:00 UCT, Prime Minister Sharif began his televised address (pre-announced four hours before) with the statement:

"Today, we have settled a score and have carried out five successful nuclear tests."

In a later address to Pakistani and foreign reporters on 29 May, Sharif said:

"Pakistan today successfully conducted five nuclear tests. The results were as expected. There was no release of radioactivity. I congratulate all Pakistani scientists, engineers and technicians for their dedicated team work and expertise in mastering complex and advanced technologies. The entire nation takes justifiable pride in the accomplishments of the Pakistan Atomic Energy Commission, Dr. A.Q. Khan Research Laboratories and all affiliated Organizations... Our security, and the peace and stability of the entire region, was gravely threatened. As any self-respecting nation, we had no choice left for us. Our hand was forced by the present Indian leadership's reckless actions. We could not ignore the magnitude of the threat... Under no circumstances would the Pakistani nation compromise on matters pertaining to its life and existence. Our decision to exercise the nuclear option has been taken in the interest of national self-defence. These weapons are to deter aggression, whether nuclear or conventional."<sup>7273</sup>

Initial reports coming out of Pakistan during the four hour and forty five minute gap between the test and Sharif's official announcement indicated that two test devices had been fired in this shot. Sharif however claimed that five had been fired. There are several reasons to find this claim improbable. Every fission device requires a certain minimum amount of material, no matter how small the yield. Testing five devices at once expended quite a lot of the fissile material available at the time. Furthermore testing multiple devices in a single shaft, and successfully collecting test data, is a technical challenge, a challenge that increases with the number of devices. Even after years of testing experience, and enormous resources, the US has not infrequently experienced failures in test data collection. Placing so many devices in one shaft would run a serious risk that the data from all of the tests would be lost, and thus the fissile material expended with negligible result. India in contrast tested all five of the devices they fired in 1998 in separate shafts. Given the relatively low total yield, most of the devices must have had quite a low yield. It is questionable that Pakistan would have a need to test so many different devices all in the same low yield range.

The second test was fired two days later, on 30 May 1998. Pakistan conducted its sixth nuclear test at Kharan, a flat desert valley 150 km to the south of the Ras Koh Hills. This was a miniaturized device giving a yield which was 60% of the first tests. This test also was plagued by questions of how many devices had actually been fired. Official Pakistani sources broke the news of two tests, and the official Associated Press of Pakistan news agency also carried the news, quoting "authentic" sources. "Yes by the grace of God,"

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<sup>72</sup> <http://nuclearweaponarchive.org/Pakistan/SharifAnnounce.txt> | Text of the Statement by Nawaz Shari regarding Chagai I, 29 May 1998

<sup>73</sup> <http://nuclearweaponarchive.org/Pakistan/PakOffAnnounce1.txt> | Text of the Declaration of the Chagai I test on the official website of the Government of Pakistan

Foreign Minister Gohar Ayub Khan told Reuters when asked if reports of two more nuclear tests on Saturday were correct. But the official government announcement by Foreign Secretary Shamshad Ahmed announced one test during a press conference, triggering a barrage of queries from surprised journalists. Intrigued by Ahmed's announcement, they asked him whether they should believe him or other officials.

"All I can say is that I am answering here for the government of Pakistan," the foreign secretary told a questioner who said Foreign Minister Gohar Ayub Khan had confirmed two explosions. Special editions of local newspapers, quoting defense officials, also carried news of two blasts.

In an interview on 30 May 1998 A. Q. Khan told the prominent Islamabad daily *The News* that the five tests were "all boosted fission devices using uranium 235" but said that although "none of these explosions were thermonuclear, we are doing research and can do a fusion test if asked. But it depends on the circumstances, political situation and the decision of the government." Khan said that of Pakistan's five tests, the first was a "big bomb" which had a yield of about 30-35 kilotons. "The other four were small tactical weapons of low yield. Tipped on small missiles, they can be used in the battlefield against concentrations of troops," he told the newspaper. "This has been a successful nuclear explosion by all definitions. It was exactly as we had planned and the results were as good as we were hoping," he said.<sup>74</sup>

The Pakistan Atomic Energy Commission (PAEC) released a statement saying the five blasts measured 5.0 degrees on the Richter Scale, and produced a yield of up to 40 kilotons of TNT. "These boosted devices are like a half way stage towards a thermonuclear bomb. They use elements of the thermonuclear process, and are effectively stronger Atom bombs," Munir Ahmad Khan, former PAEC director, told Agence France-Presse. Khan said Pakistan has had a nuclear capability since 1984 and all the Pakistani devices were made with enriched uranium.

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<sup>74</sup> <http://nuclearweaponarchive.org/Pakistan/KhanInterview.html> | Transcript of the interview with Abdul Qadeer Khan on 30 May 1998 after the blasts

### Links for Further Research on Pakistan's Nuclear Programme

- [Nuclear Chronology of Pakistan on a Pakistan Defense Forum](#)
- [Foreign Relations of the United States of America in 1955](#)
- [Nuclear Profile of Pakistan | Nuclear Threat Initiative](#)
- [A very detailed timeline of the nuclear programme of Pakistan by Nuclear Threat Initiative](#)
- [The Enduring Effects of Atoms for Peace Program | Peter R. Lavoy, Arms Control Association](#)
- [Firs Progress Report on NSC 5049: United States Policy towards South Asia](#)
- [Pakistan's Nuclear Programme; 1998: The Year of Testing | Nuclear Weapons Archive](#)

## International Reaction to India and Pakistan's Nuclear Test

- [http://cns.miis.edu/india\\_pakistan/](http://cns.miis.edu/india_pakistan/)
- [World's Concern at Nuclear Tests](#) | BBC, 1 June 1998
- [Australian Response to the Indian Nuclear Test](#) | 14 May 1998
- [Middle East Reverberations of the Nuclear Tests in India and Pakistan](#) | the Washington Institute
- [India-Pakistan Nuclear Tests and U.S. Reaction](#) | CRS Report for Congress
- [Indian Nuclear Tests, Then and Now: An Analysis of US and Canadian Responses](#) by *P.M. Kamath*
- [Response of the Government of Japan to the Nuclear Tests conducted by India and Pakistan](#) | Ministry of Foreign Affairs, Japan
- [Security Council condemns tests by India and Pakistan](#) | UN Press Release
- Text of the adopted unanimously on 6 June 1998

## United Nations Security Council and the Nuclear Tests of 1998

1. [Statement by the President of the Security Council](#) at the 3881st meeting of the Security Council held on **14 May 1998**, in connection with the Council's consideration of the item entitled "The responsibility of the Security Council in the maintenance of international peace and security".
  - [Records of the meeting](#)
  - [Press Release](#)
2. [Statement by the President of the Security Council](#) at the 3888th meeting of the Security Council held on **29 May 1998**, in connection with the Council's consideration of the item entitled "The responsibility of the Security Council in the maintenance of international peace and security".
  - [Records of the meeting](#)
  - [Press Release](#)
3. On **6 June 1998**, the Security Council condemned the nuclear tests carried out by India and Pakistan and adopted [UNSC Resolution 1172 \(1998\)](#) unanimously.
  - [Records of the meeting](#)
  - [Press Release](#)