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Issue Brief

Pakistan: Misperceptions about Nuclear Stockpiles

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Recently, Western and Indian analysts have widely publicized unsubstantiated assumptions that Pakistan's nuclear arsenal is growing at a rapid pace, and that the country could become the third largest nuclear weapon state by next five to ten years.[1] These assumptions are largely based on speculation and hypothetical assessments, ill-founded media reports and attribution to vague sources. No scientific methodology has been used to reach conclusions.

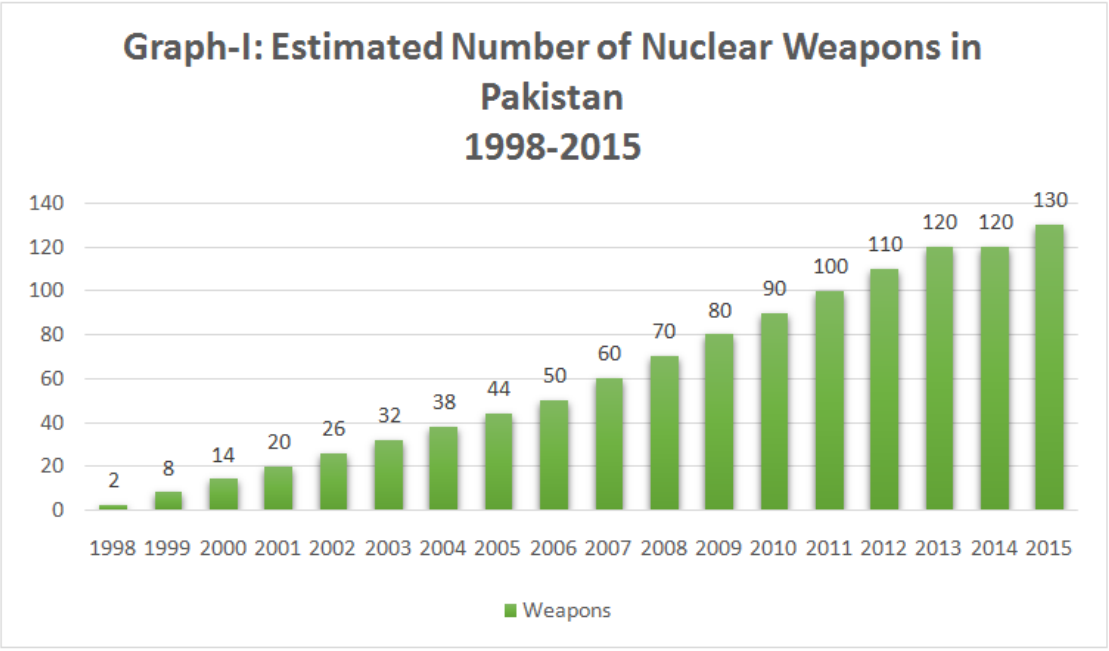
Like all other nuclear weapon states (NWS), Pakistan has never declassified such information as to how many nuclear weapons does the country really possess. What is the total quantity of Highly Enriched Uranium (HEU-235) and weapon-grade Plutonium (Pu-239) in its possession? What is the number of nuclear weapons that are developed per year in Pakistan? The question that comes to mind is that, in the absence of such information, how could western analysts assume the number of Pakistan's nuclear weapons?

Initially, there used to an argument that Pakistan was rapidly expanding its nuclear programme including both civilian and military components. Chaim Braun gave an exaggerated figure of the size of Pakistan's nuclear programme and cautioned that rapid expansion in Pakistan's nuclear complex may cause safety and security issues.[2] Later on, there was more focus on fast expansion in the number of Pakistan's nuclear weapons. In this regard, in 2009, in *New York Times,* Thom Shanker and David E. Sanger quoted Adm. Mike Mullen, the US former Chairman of the Joint Chiefs of Staff, as saying that Pakistan was rapidly adding to its nuclear arsenal.[3] The estimated number of nuclear weapons given at that time was 80 to 100. Some quoted 90 to 100 weapons in the same year. Roberts Norris and Hans M. Kristensen, in their article in the *Bulletin of Atomic Scientists*, have stated that Pakistan was rapidly expanding its nuclear weapons.[4] While referring to the satellite imagery, Andrew Bast, editor at *Newsweek,* claimed that Pakistan was actively pursuing the construction of Khushab reactor for plutonium production for its nuclear weapons programme.[5] Mitt Romney, US Presidential candidate in 2012, on the basis of experts' supposition, stated in a public debate that Pakistan could have "more [nuclear weapons] than Great Britain sometime in the relatively near future."[6] Mark Fitzpatrick in *Overcoming Pakistan's Nuclear Dangers,* has stated that Pakistan has enough fissile material to build 110-120 nuclear weapons.[7] Christopher Clary in *The Future of Pakistan's Nuclear Weapons Program,* predicted that by 2020, Pakistan could have enough fissile material to produce more than 200 nuclear weapons.[8] Gregory D. Koblentz in his report *Strategic Stability in the Second Nuclear Age,* made similar predictions.[9] An editorial *Nuclear Fears in South Asia,*[10] published in *The New York Times,* on April 6, 2015, followed by a

report by Micheal Krepon and Toby Dalton *A Normal Nuclear Pakistan,* projected that because of its world's fastest-growing nuclear weapon programme, Pakistan was a major concern in South Asia.[11] Similarly, Hans M. Kristensen and Robert S. Norris in their recent article made a high jump from their previous assumptions in 2015.[12] Their estimation in 2011 was 90 to 100 nuclear warheads which increased to 120 to 130warheads in 2015.[13] Their further assumptions proposed that Pakistani "stockpile could more realistically grow to 220to 250 warheads by 2025."[14]

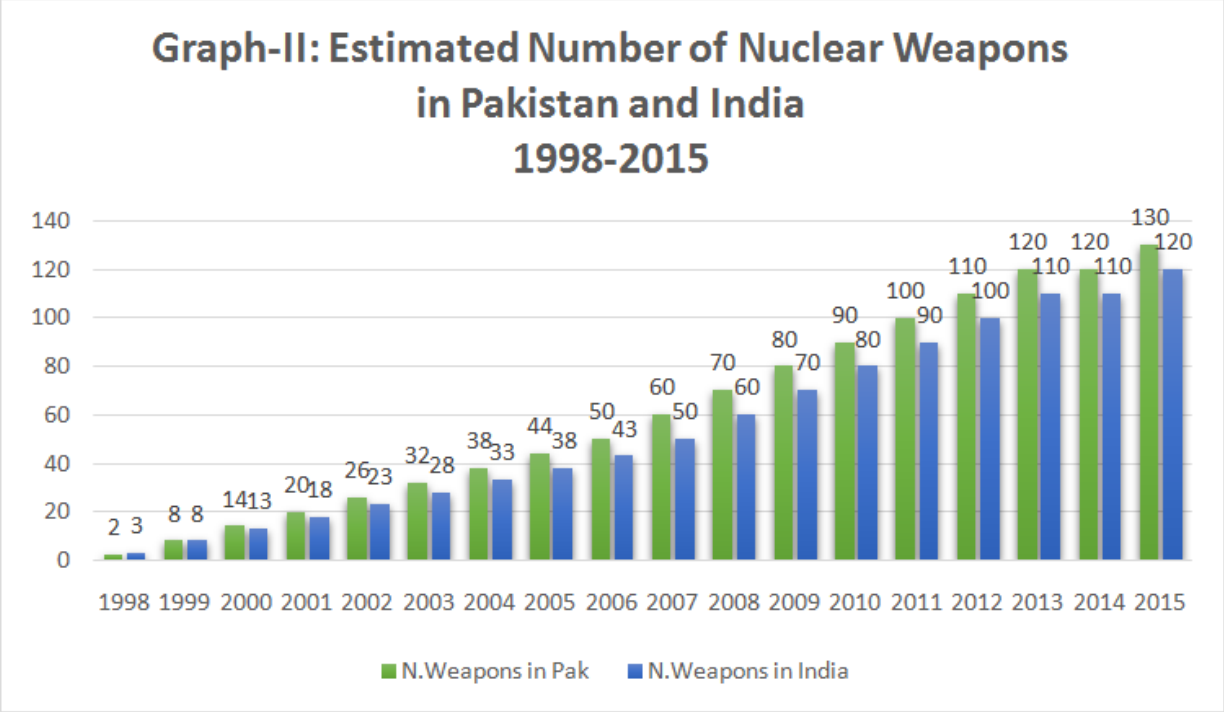
Western concerns about Pakistan's nuclear weapons are usually based on theoretical perceptions. Nuclear installations especially in nuclear weapon states are under strict security monitoring and people working in these installations are under tight observation. It is a proven fact that all nuclear weapon states have kept their nuclear weapons programme under fool-proof safety, security and secrecy. Human Reliability Programme (HRP) and Personnel Reliability Programme (PRP) have been standardised in order to deal with people working in civil and military nuclear industry.

In case of Pakistan, Western analysts usually make estimations on the basis of media reports, satellite imagery, unknown sources and "recycled citation". Since Pakistan conducted its nuclear tests in 1998, various calculations and estimations have been developed to create perceptions that Pakistan is rapidly increasing its nuclear stockpiles. Such analyses contradict the previous data. Estimations by Roberts Norris and Hans Kristensen about Pakistan's nuclear weapons from 1998 to 2015 are given in Graph-I below[15]:



The gradual increase shows that from 1998 to 2006, Pakistan was developing 6 weapons per year, and from 2007 to 2015, it increased to 10 weapons per year. This estimation has been cited by many journals, think tanks and analysts while discussing Pakistan's nuclear forces. However, these reports are not supported by any technically proven evidence. Mostly, western newspapers "disclose" these estimations in their editorials from time to time to raise alarm about Pakistan's nuclear weapon programme.

To understand the pace of the development of Pakistan's nuclear programme, comparison with India is given below in Graph-II:[16]



The projection given in the above graph is misleading. Pakistan embarked upon the uranium enrichment route and India pursued plutonium route. Pakistan has limited resources to operate its nuclear programme and limited stocks of fissile material. India has enough fissile materials -both uranium (HEU-235) and plutonium (Pu-239) - and open access to global nuclear industry.

Pakistan's nuclear programme is only India specific – India potentially targets wider regions such as China, Europe, Middle East and Asia Pacific.

Indian nuclear industry is much bigger than Pakistan's. India is active in building its nuclear power plants, research facilities and other related installations at a tremendous speed. According to World Nuclear Association, currently there are 21 nuclear power reactors operating in India and 6 more are under construction.[17] The total number of planned or proposed nuclear power reactors are approximately 35, including a Fast Breeder Reactor.[18] On the other hand, Pakistan has 3 power plants and 4 are under construction.[19] Besides, estimations of Pakistan's nuclear warheads and delivery vehicles are publicised without reference to what India is producing. Given below is a comparison of fissile material of two countries.

Table 1: Pakistan-India Fissile Material: Comparison Based on Estimated Data in 2015

Fissile Material	Pakistan	India
Weapon Grade Uranium	3.0 ± 1.2 tons[20]	3.2[21]
Weapon Grade Plutonium	0.17 tons[22]	0.59 ± 0.18 tons[23]
For Nuclear Weapons	Estimated to have enough fissile material for more than 200 weapons[24]	India has enough fissile material, both reactor and weapon-grade plutonium, for more than 2,000 warheads.[25]

Above estimations establish that India has larger HEU and Pu-239 stocks than Pakistan. Pakistan has maintained its position of minimum credible deterrence and its nuclear weapons are only meant to counter Indian aggression. Western and Indian mainstream media are deliberately creating misperceptions to tarnish Pakistan's image.

Conclusion:

Misleading estimations by Western and Indian analysts are a deliberate attempt to undermine Pakistan and its nuclear weapons programme. Indian and Western analysts highlight the vulnerabilities of Pakistan's nuclear programme and raise security concerns about it. It is therefore important to constantly correct misperceptions.

Up to now, estimations about Pakistan's nuclear warheads and delivery vehicles have been blown out of proportion to create alarm. There is no doubt that Pakistan continues to maintain the credibility of its nuclear deterrence. For that purpose, because of a series of escalatory steps taken by India since 1998, Pakistan has declared that it would pursue a full spectrum deterrence. In response to Cold Start Doctrine

(CSD) of India, Pakistan produced small low yield nuclear weapons to ensure that India's threatened aggression under CSD does not succeed. However, Pakistan has made a conscious decision that it would not pursue an arm race in South Asia. Pakistan does not seek parity with India but aims to maintain symmetry, credibility and effectiveness of its deterrence. In fact, Pakistan would like to revive dialogue with India on nuclear CBMs. In this context, Pakistan would also like enhanced focus on its longstanding proposal for a Strategic Restraint Regime (SRR), comprising nuclear and missile restraint, conventional balance and conflict resolution.

Notes and References:

[1] Michael Krepon and Toby Dalton, "A Normal Nuclear Pakistan," *Stimson Center and Carnegie Endowment for International Peace*, September, 2015, p.21.

[2] Chaim Braun, "Security Issues Related to Pakistan's Future Nuclear Power Program," in Henry D. Sokolski (ed.), *Pakistan's Nuclear Future: Worries Beyond War*, Strategic Studies Institute, U.S. Army War College: Carlisle, PA, 2008, p.277.

[3] Thom Shanker and David E. Sanger, "Pakistan Is Rapidly Adding Nuclear Arms, U.S. Says," *The New York Times*, MAY 17, 2009, http://www.nytimes.com/2009/05/18/world/asia/18nuke.html, Accessed on October 23, 2015.

[4] Roberts Norris and Hans Kristens, "Nuclear Notebook: Pakistani Nuclear Forces, 2011," *Bulletin of the Atomic Scientists*, Vol. 67 No. 4, July/August 2011, p.91.

[5] Andrew Bast, "Why Does Pakistan Have World's Fastest-Growing Nuclear Program?" *The Christian Science Monitor*, May 17, 2011, http://www.csmonitor.com/World/Asia-South-Central/2011/0517/Why-does-Pakistan-have-world-s-fastest-growing-nuclear-program, Accessed on October 23, 2015.

[6] Louis Jacobson, "Mitt Romney says Pakistan is on a path to overtake the U.K. in nuclear weapons," *Politi Fact*, October 23, 2012, http://www.politifact.com/truth-o-meter/statements/2012/oct/23/mitt-romney/mitt-romney-says-pakistan-path-overtake-uk-nuclear/, Accessed on October 23, 2015.

[7] Mark Fitzpatrick, *Overcoming Pakistan's Nuclear Dangers*, London: International Institute for Strategic Studies (IISS), Adelphi Series No. 443, 2013, pp. 18–22.

[8] Christopher Clary, "The Future of Pakistan's Nuclear Weapons Program," in Ashley J. Tellis, Abraham M. Denmark, and Travis Tanner (eds.), *Strategic Asia 2013-14: Asia in the Second Nuclear Age*, Washington, DC: National Bureau of Asia Research, 2013, pp. 135–37.

[9] Gregory D. Koblentz, "Strategic Stability in the Second Nuclear Age," *Council on Foreign Relations*, CSR No.71, November 2014, pp.14-15.

[10] New York Times, "Nuclear Fears in South Asia," New York Times, April 6, 2015, http://www.nytimes.com/2015/04/06/opinion/nuclear-fears-in-south-asia.html?_r=0, Accessed on October 24, 2015.

[11] Michael Krepon and Toby Dalton, "A Normal Nuclear Pakistan," *Stimson Center and Carnegie Endowment for International Peace*, September, 2015, p.9.

[12] Roberts Norris and Hans Kristens, "Pakistani Nuclear Forces, 2015," *Bulletin of the Atomic Scientists*, October 19, 2015, p.1, http://bos.sagepub.com/content/early/2015/10/06/0096340215611090.full.pdf+html, Accessed on October 24, 2015.

[13] Ibid.

[14] Ibid., p.2.

[15] Robert S. Norris and Hans Kristensen, "Global Nuclear Weapons Inventories, 1945–2013," *Bulletin of the Atomic Scientists*, September/October 2013, Vol. 69, No. 5, p.75. For data year 2014, Phillip Patton Schell And Hans M. Kristensen, "Pakistani Nuclear Forces," *SIPRI Year Book 2014*, http://www.sipri.org/yearbook/2014/06. For data 2015, Roberts Norris and Hans Kristens, "Pakistani Nuclear

Forces, 2015," *Bulletin of the Atomic Scientists*, October 19, 2015, p.1, http://bos.sagepub.com/content/early/2015/10/06/0096340215611090.full.pdf+html, Accessed on October 24, 2015.

[16] See endnotes XVI. For India 2014 data, see http://www.sipri.org/yearbook/2013/06, Accessed on October 28, 2015. For India 2015 data, see http://thebulletin.org/2015/september/indian-nuclear-forces-20158728, Accessed on October 28, 2015.

[17] World Nuclear Association, "Nuclear Power in India," October 2015, http://www.world-nuclear.org/info/Country-Profiles/Countries-G-N/India/, Accessed on October 30, 2015. See also, Nuclear Power Corporation of India Limited,http://www.npcil.nic.in/main/allprojectoperationdisplay.aspx.

[18] Ibid.

[19] World Nuclear Association, "Nuclear Power in Pakistan," http://www.world-nuclear.org/info/Country-Profiles/Countries-O-S/Pakistan/, Accessed on October 30, 2015.

[20] Nuclear Threat Initiative (NTI), http://www.nti.org/analysis/articles/pakistan-nuclear-disarmament/, Accessed on October 30, 2015. See also, International Panel on Fissile Materials, http://fissilematerials.org/library/ipfm15.pdf.

[21] Nuclear Threat Initiative (NTI), http://www.nti.org/analysis/articles/india-nuclear-disarmament/, Accessed on October 30, 2015. See also, International Panel on Fissile Materials, http://fissilematerials.org/library/ipfm15.pdf.

[22] Nuclear Threat Initiative (NTI), http://www.nti.org/analysis/articles/pakistan-nuclear-disarmament/, Accessed on October 30, 2015. See also, International Panel on Fissile Materials, http://fissilematerials.org/library/ipfm15.pdf.

[23] Nuclear Threat Initiative (NTI), http://www.nti.org/analysis/articles/india-nuclear-disarmament/, Accessed on October 30, 2015. See also, International Panel on Fissile Materials, http://fissilematerials.org/library/ipfm15.pdf.

[24] Nuclear Threat Initiative (NTI), http://www.nti.org/analysis/articles/pakistan-nuclear-disarmament/, Accessed on October 30, 2015. See also, International Panel on Fissile Materials, http://fissilematerials.org/library/ipfm15.pdf.

[25] Baqir Sajjad Syed, "Broadest Deterrence Capability to be Kept," *DAWN Newspaper* (Islamabad), September 10, 2015.