

# **Nuclear Juxtaposition in South Asia**

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# Plan:

- Nuclear weapons in South Asia
- Strategic stability in South Asia
  - Concept of “credible minimal deterrence”
- Arms control in South Asia
- Confidence-building measures in South Asia
- Strengthening nuclear security in South Asia

# Nuclear Weapons in South Asia



# South Asia



	India	Pakistan
<b>Stockpiles of weapon-grade nuclear materials (estimate)</b>		
Weapon-grade Pu (number of warheads)	334-504 kg (75-110 warheads)	36-80 kg (10-20 warheads)
Weapon-grade U	?	1100-1400 k (50-110 warheads)
<b>Nuclear weapons delivery vehicles</b>		
Aviation (range, km; payload, kg)	36 Mirage 2000H (1850;6300); 64 Jaguar S(I) (1400;4760).	21 F-16A (1600;4500); 11 F-16B (1600;4500).
Tactical missiles (range, km; payload, kg)	15 Prithvi I (150;800); 8-12 Agni I (>700;1000); ? Dhanush (400;1000).	95 Hatf I (70-100; 450-500); ? Abdali/Hatf II (180-200; 450-500); 50 Ghaznavi/Hatf III (90; 500-700); 6 Shaheen I /Hatf IV (>450;750-1000).
Strategic medium range missiles (range, km; payload, kg)	? Agni II (>2000;1000); ? Agni III (3000-5000; 2500)	15-20 Ghauri/Hatf V (~1300; 700-1000); ? Shaheen II (2500; 700-1000).

# Missiles Agni II (India) and Shaheen II (Pakistan)



# Missiles Agni II (India) and Shaheen II (Pakistan)

## ESTIMATED MISSILE CAPABILITIES

KEY:

- Pakistan
- India



**INDIA**  
**AGNI II**  
Range: 2,500km  
Warhead: 200kT  
Tested: 1999



**PAKISTAN**  
**SHAHEEN II**  
Range: 2,000km  
Payload: 1,000kg  
Tested: 2004

PAKISTAN

INDIA

SOURCE: CSIS

# Strategic Stability in South Asian Region



Peace and security and the very survival of the South Asian subcontinent depends upon the robustness of nuclear deterrence and strategic stability.

Zafar Iqbal Cheema



# Key Elements of Strategic Stability

- An acceptance of the idea of mutual assured destruction that excludes the possibility of nuclear war and an implicit acceptance of the concept of nuclear parity.
- An agreement to start a process of limiting numbers of offensive nuclear weapons in each other's arsenal and thereby prevent an unconstrained arms race.
- Confidence building measures (CBMs) and "hot-line" communication that could be used during crises to prevent escalation to nuclear exchange.

# Acceptance of the Idea of Mutual Assured Destruction

- Both India and Pakistan have declared that they would adhere to a concept of “credible minimal deterrence”.
- In each case the meaning of the concept and posture is different but at the same time linked to each other.

# From India's Point of View Minimal Nuclear Deterrence Requires:

- Sufficient, survivable and operationally ready for launch nuclear forces;
- Robust command and control system;
- Effective intelligence and early warning capabilities;
- Comprehensive operational planning and training in line with the strategy;
- The will to employ nuclear weapons if necessary.

# Unclear Issues:

- Attempting to increase the credibility and effectiveness of deterrent, India's nuclear doctrine refrains from limiting itself to minimal nuclear deterrence.
- India's no-first-use obligation. Today, when India does not possess effective second strike capabilities (for example ground-mobile or submarine-launched ballistic missiles), and when it does not have its own ballistic missile defense, some experts doubt that New Delhi strictly adheres to the no-first-use obligation.

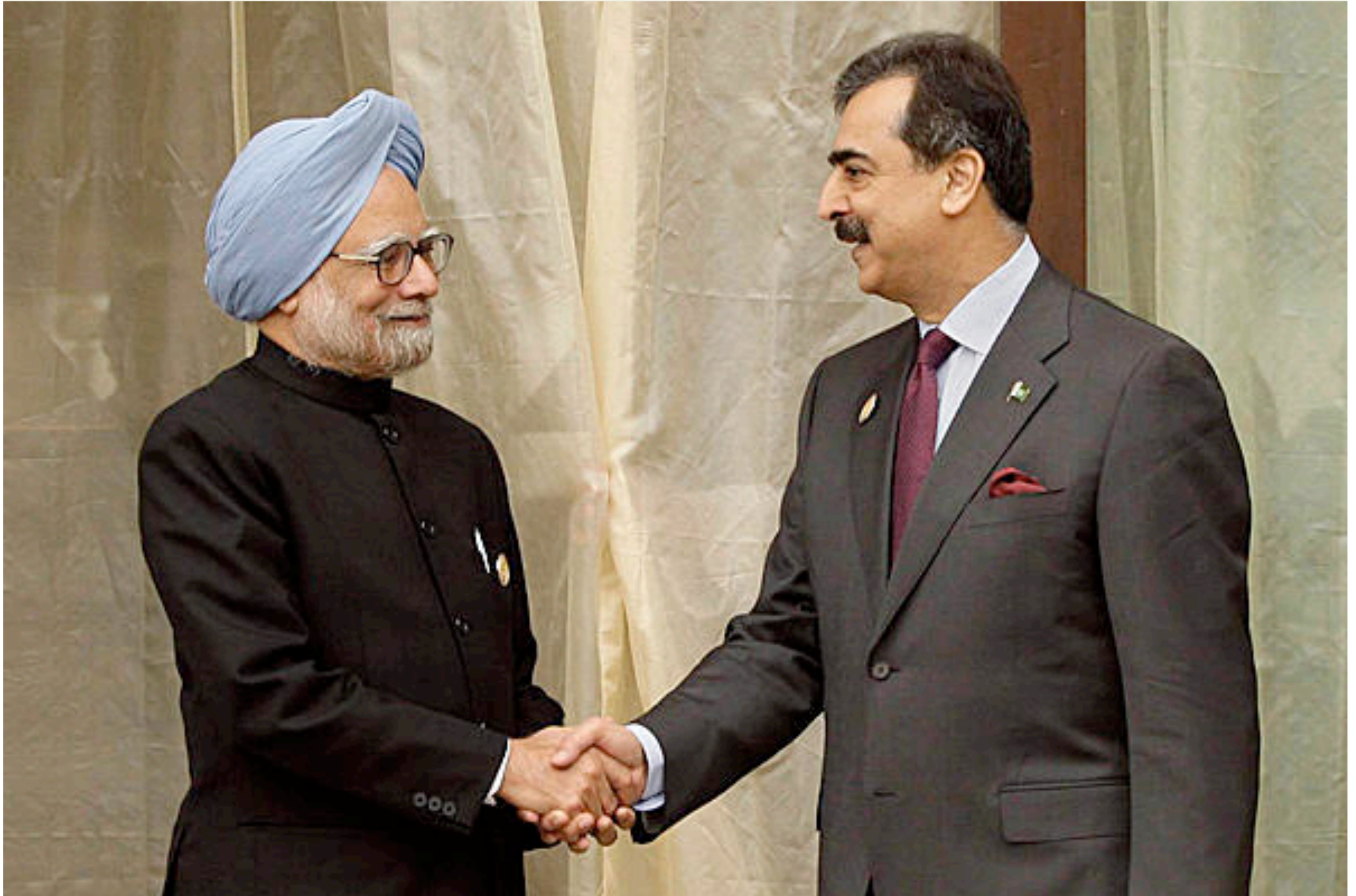
# Pakistan's Minimal Deterrence is Subject to Changes

- This principle being linked to first-strike concept can not be defined in finite constant numbers.
- The nuclear forces of Pakistan and their deployment pattern may change due to risks of India's pre-emption and interception.

# Nuclear Optimists and Pessimists

- Nuclear weapons build-up in South Asia will not lead to the deliberate outbreak of large-scale war in South Asia (nuclear optimists and pessimists).
- Nuclear exchange is likely to occur, especially taking into account repeated Indo-Pakistani confrontations and still underdeveloped nuclear command-control and missile attack warning systems (nuclear pessimists).
- This disaster in a nuclear South Asia remains highly unlikely, in view of the practice of low combat readiness during peacetime, which would allow India and Pakistan to reconstitute their retaliatory capabilities in hours to weeks time (nuclear optimists).

## Arms Control and Confidence-Building Measures in South Asia



# Arms Control in South Asia

There is no agreement between India and Pakistan, because:

- Capabilities of each of two South Asian countries for nuclear weapons build-up are more or less known for another country.
- India and Pakistan, which adhere to minimal nuclear deterrence, are not interested in nuclear arms race.



# India, Pakistan and China's Divergence of Interests in Regional Arms Control

- India is more interested in controlling nuclear arsenal of China rather than Pakistan.
- China shows no interest in exchanging data on nuclear weapons with India.
- Pakistan would like to ready an agreement with India on nuclear arms control.
- India is unlikely to go for such an agreement with Pakistan.

# Confidence-Building Measures (no verification mechanism)

India and Pakistan have a number of agreements, namely:

- 1988 agreement on the prohibition of attack against nuclear installations and facilities, which requires an exchange of lists of respective nuclear installations on 1 January every year.
- 2005 missile test pre-notification agreement.
- 2007 agreement on reducing the risk of accidents relating to nuclear weapons.

“India is ready for comprehensive talks”



# Strengthening Nuclear Security in South Asia

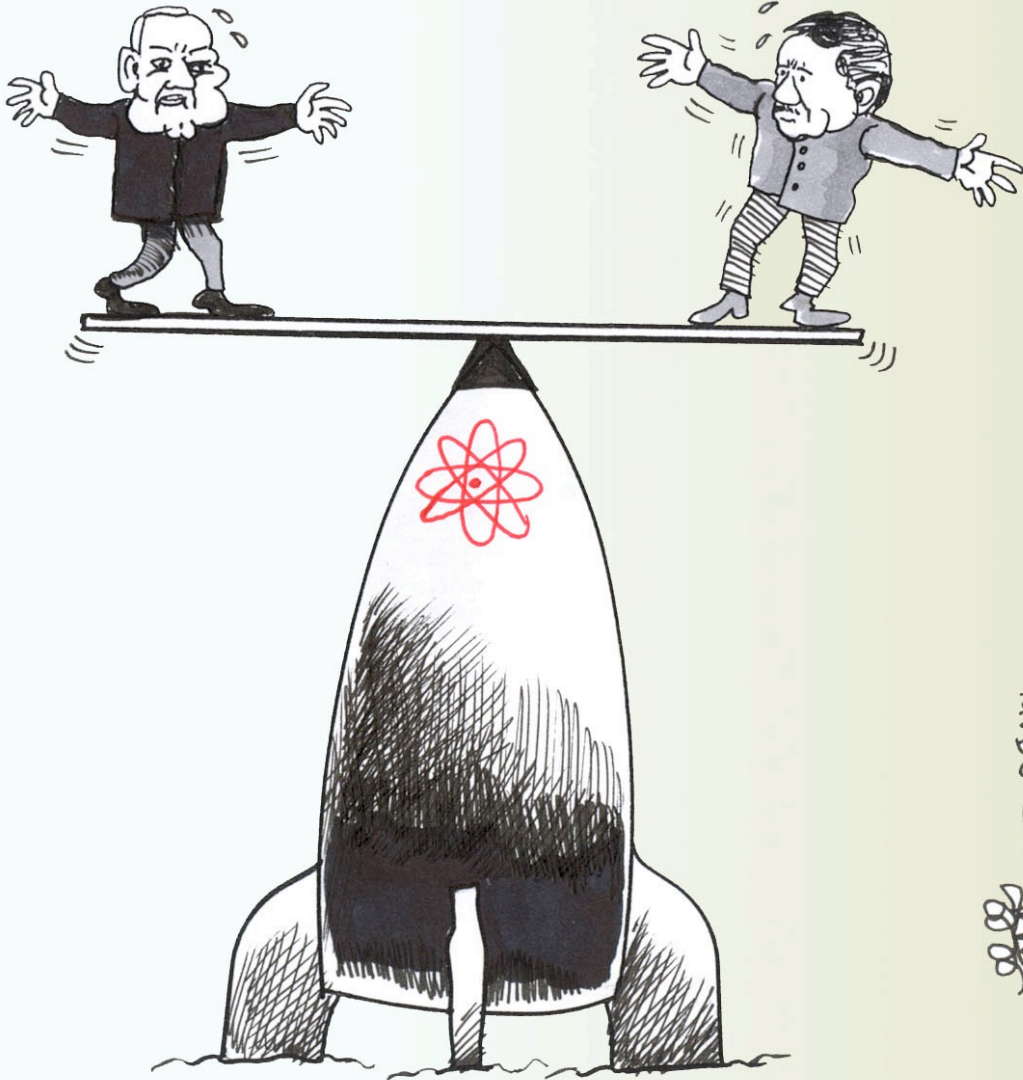
- Kashmir is the key to a stable South Asia. India has to be engaged in talks at the highest level. Pakistan has to shut down terrorist infrastructure on its territory.
- Despite the difficulties related to the resumption of the Composite Dialogue, it is necessary to resume it and to include issues of nuclear security.
- In the framework of this dialogue India and Pakistan could exercise mutual restraint in the development of nuclear weapons and create verification mechanisms.
- Both states could provide greater transparency in their numbers and deployment.
- They could negotiate confidence-building measures with regard to conventional and nuclear forces.

# Strengthening Nuclear Security in South Asia

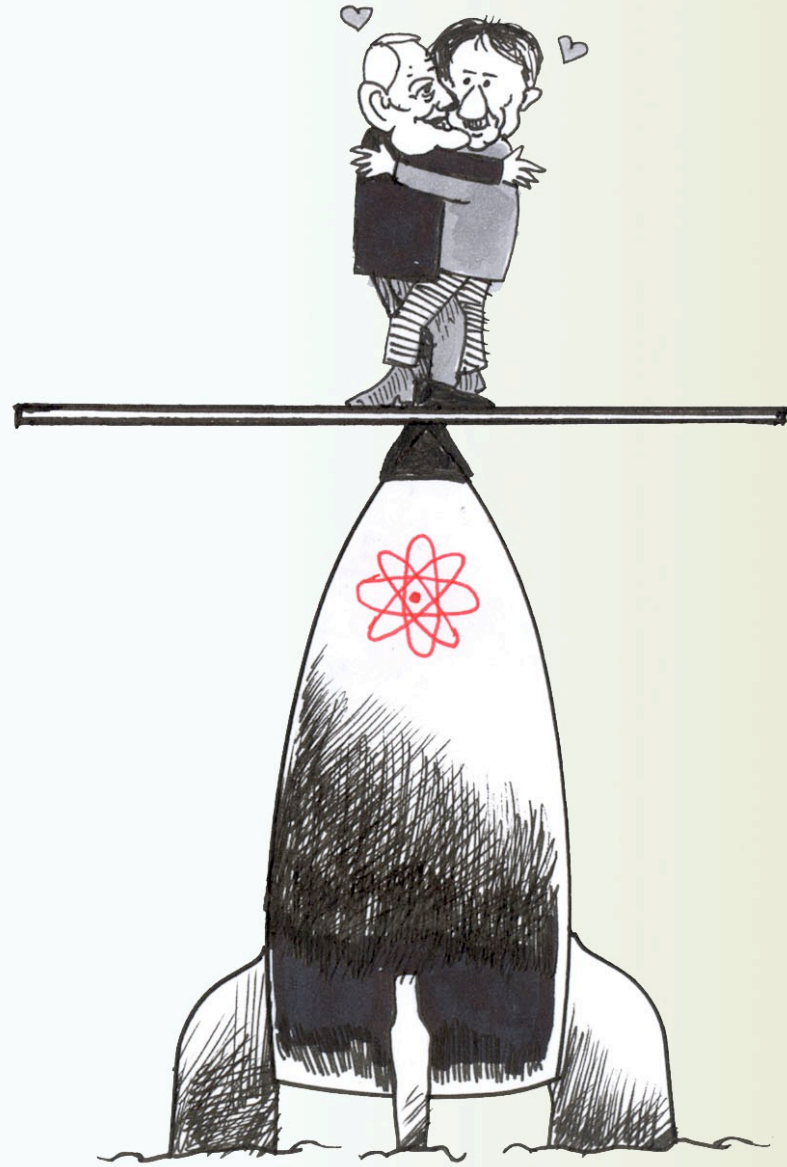
- The common security approach could encourage exchanges, joint exercises and eventually operations of the armed forces of India and Pakistan. This approach could reinforce the need for regional collaboration on political and economic security.
- The nuclear weapons states (foremost the United States, Russia and China), should demonstrate to others states their strong commitment to nuclear non-proliferation and disarmament not only by new START Treaty, but also through START follow-on, ratification of CTBT and achieving FMCT.

INDIA • PAKISTAN

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A. B. S. 1981  
SMB