



# National Security Dynamics in India's Space Programme

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# Indian Space Programme: Initial Years

- ▶ Space for development agenda
  - ▶ Communication satellites operating in Asia-Pacific
  - ▶ Remote sensing satellites with services to regional and global customers
- ▶ Relevance for national security; Technology demonstration
  - ▶ Articulation by Vikram Sarabhai, Nehru
- ▶ Traditionally, against militarization of OS
  - ▶ Indian criticism of programmes such as Star Wars or SDI and ASAT - that these could be used in MD and ASAT although not against passive military uses – ISR
- ▶ India in multilateral fora
  - ▶ Ban on space weapons; no weapons on any global commons
  - ▶ Rajiv Gandhi “a declaration of 6 nonaligned countries opposing arms race in OS and nuclear testing” in January 1985
- ▶ Much of the debate on strengthening state sovereignty; morality, sovereignty and principles as against national security
  - ▶ Concepts like non-discriminatory, comprehensive and universal disarmament



# Indicators of Rethink in India's Approach

- ▶ Driven by changing security scenario since early 2000s
- ▶ May 2001: India's reaction to Prez. Bush's MD speech
  - ▶ India's own interest in developing BMD system
  - ▶ Domestic criticism; retracted to old comfortable stance
    - ▶ CD in 2006: "India is fully committed to the peaceful pursuit of space technology..."
    - ▶ Nevertheless, more ambivalent and nuanced
  - ▶ The new position – reflection of a more pragmatic and national security-driven approach

# Indicators; Contd.

- ▶ Chinese ASAT test in January 2007 big push for changes
- ▶ Statements from the Indian leadership across the board:
  - ▶ DRDO chief, M Natarajan: collaboration between ISRO and DRDO
  - ▶ K Kasturirangan: “we cannot overlook this aspect. India has spent a huge sum to develop its capabilities and place assets in space. Hence, it becomes necessary to protect them from adversaries. There is a need to look at means of securing these.”
  - ▶ EAM Pranab Mukherjee: “there are also new sets of challenges which China poses such as strategic challenge as China develops its capabilities in outer space... we would need to develop more sophisticated ways of dealing with these new challenges posed by China.”
  - ▶ RM AK Antony: “offensive counter-space systems like anti-satellite weaponry, new classes of heavy-lift and small boosters and an improved array of military systems have emerged in our neighbourhood.”
  - ▶ K Radhakrishnan: talked of dangers from space debris and how potential collision between debris pieces poses a greater danger to operational satellites



# New Security Orientation: Rationale

- ▶ Puzzle to many outside India why a developing country focuses on OS, esp. the military facets
- ▶ Changing regional and global military balance
- ▶ Growing trend of militarisation (weaponisation)
- ▶ Securitisation of political issues leading to greater emphasis on hard power
- ▶ Signs of arms race, including in space
  - ▶ Spacefaring powers pushing for greater militaristic role for space; growth of CS capabilities
  - ▶ India's inaction could leave it lagging in critical cap
- ▶ Despite Indian rhetoric, developing necessary hardware and military characteristics



# Rationale; Contd.

- ▶ Advanced military space programmes, including ASAT
- ▶ Increasing space debris, risking civilian assets
  - ▶ India's assets worth US \$ 37 bn
- ▶ India's fraught relations with neighbours
  - ▶ China's decision to achieve parity with the US; national and regional prestige; China's proliferation of space capabilities
- ▶ Aspiring global & regional power: competitive defence cap
  - ▶ India needs to develop military assets in space and on ground
  - ▶ Satellites essential for military ops



# Indian Military & Space

- ▶ First dedicated military satellite in August 2013
- ▶ Nearly a dozen dual use satellites
- ▶ Imaging intelligence
- ▶ Significant after the Mumbai terror attacks
  - ▶ RISAT-2 (April 2009), (RISAT-1, April 2012, now defunct) – SAR payload
  - ▶ RISAT-2 considered a force-multiplier
- ▶ Navigational System – IRNSS – fairly small
- ▶ Early Warning
- ▶ Military Communication Satellite





# Institutional Architecture

- ▶ Integrated Space Cell within IDS MoD HQ (2008)
- ▶ Indian Navy
  - ▶ Assistant Chief of Naval Staff (Communications Space and Network Centric Operations (ACNS-CSNCO)) to supervise space-based military cap
- ▶ Home Ministry modifications
  - ▶ Plans for a Border Space Command for surveying the borders with Pakistan, China, BD, Myanmar, Nepal; \$2 bn approved by the Ministry for the Command
  - ▶ Task Force Report on Space Technology in Border Management – island development, border security, communication and navigation, GIS and operations planning system, border infrastructure development – 5-yr plan
- ▶ SSA ISRO – Directorate of Space Situational Awareness and Management – Project Netra





## But India still lagging..

- About 50 active satellites; about a dozen dual-use satellites, GSAT-7 and GSAT-7A for the IN and IAF
- Small sats and SSLV used for strategic functions?
- Debate on a joint aerospace command for more than a decade
  - Defence Space Agency (DSA), possible interim measure



# Why Act Now?

- ▶ China's growing space prowess
- ▶ China's CS capabilities seen as limiting or preventing an adversary from using space assets in times of conflict
- ▶ Growth in counter-space capabilities
- ▶ Militarisation vs. Weaponisation
- ▶ Mil ops extremely net-centric one - shorter timeframes, high tech environment - integration of space assets
  - ▶ Operation Desert Storm & Iraqi Freedom demonstrated the 'force-multiplier' nature
  - ▶ A range of activities including navigation, communication, weather, environment and terrain observation, ISR

# What needs to be done?

- ▶ No need to expand the size of the mil to augment space utilization
  - ▶ Reorganization & reorientation to streamline integration and utilization of space at tactical level
- ▶ Integrated Space Cell, Indian Army Space Cell first baby steps but not matured to create the right amount of synergy and purpose
  - ▶ DSA a step forward
- ▶ Long borders, expansive coastal areas, increasing securitization of even political and territorial issues call for continued vigilance and surveillance
- ▶ Indian capacity deficient
  - ▶ Launch infrastructure – need to strengthen its competitiveness or risk lagging
  - ▶ Recent govt. announcement - the pvt. sector to fill in the capacity deficit
    - ▶ Wait n watch approach - requires a legal and regulatory framework
    - ▶ Fresh news reports: A new board with powers independent of ISRO proposed with a chairman and a few members from different strategic sectors and independent experts
    - ▶ The board expected to lay out the pathways for pvt sector to engage in R&D of rockets and satellites as well as space missions
    - ▶ The PMO is to decide on the constitution and autonomy of this board



## In Conclusion,

- ▶ India's rhetoric against militarisation continues but growing trend towards weaponisation and international rule-making pushed India to opt for more pragmatic decisions
- ▶ Given the Indian ASAT, separate military space programme and policy will serve to promote India's interests; provide for greater resource allocation
- ▶ India's space policy should be guided by commercial and national security orientation
- ▶ Political leadership should own this domain, provide future direction, and not leave it to the scientific bureaucracy