

Europe as A Partner: An Indian View

Dr. Rajeswari Pillai Rajagopalan
Senior Fellow
Observer Research Foundation
New Delhi

Structure

- Indian space programme: Priorities
- EU-India convergence
- Areas of cooperation
- India and the EU space code

India's Space Programme: Focus Areas

- India's space program → strong civilian, developmental roots
 - Use of space technology for societal development and peaceful utilities
 - Large no. of assets for applications from service industry to scientific sectors – meteorological observations, telemedicine, weather forecasting, agriculture, Direct To Home (DTH) TV services, search & rescue ops and remote sensing, telecommunications
 - India's IRS satellite imageries in different spatial resolutions, spectral bands used for – agriculture, water resources, urban development, mineral prospecting, environment, ocean resources, disaster management
 - Also RISAT-2-like satellites with SAR, providing resolution of one metre – a day-night, all-weather imaging satellite capable of tracking activities particularly in India's neighbourhood
 - Chandrayan mission using ISRO's PSLV to launch a lunar impactor and a lunar orbiter

Economics of India's Space Programme

- Huge investments with huge stake
 - Value: \$ 2.3 bn; \$ 37 bn, including the ground-based infrastructure, value-added services
- Protection of assets – a major challenge

EU-India Convergence

- Commonality of approaches
 - For developmental and peaceful purposes
 - Assure independent and equitable access to space
 - Technology demonstration including manned spaceflight capability
- Areas of cooperation
 - Europe's launch of Apple, India's 1st geostationary satellite
 - Chandrayaan-1 lunar mission (payloads from UK, Germany, Sweden)
 - India-ESA first pub.-pvt. partnership – Highly Adaptable Satellite (Hylas)-1 satellite (Antrix-Astrium Satellites)

Future Potentials

- Push factors
 - The intent to increase competitiveness
 - The US-India nuclear deal that changed regional and global dynamics
 - The shifting balance of power towards Asia
 - The evolving military balance in Asia – increasing militarisation
 - Space race, including potential Indian ASAT test

Key Areas of Cooperation

- Space Situational Awareness
- Environmental Intelligence and Disaster warning
- Assist in imagery and command and control communications to support for humanitarian relief ops
- Maritime Domain Awareness
- Air Domain Awareness
- Missile warnings
- Space debris – active debris removal measures
- Space exploration
- SBSP

Strengths and Weakness of Int'l Coop

- Exploitation of space necessary for development
- Int'l coop could minimise costs and conflicts
- Unrestricted int'l cooperation – potential to perpetuate regional and int'l insecurities
 - Increasing regional / international insecurities could lead to arms race, lowered threshold levels of warfare
 - Need to bring certain restraint on state behaviour, both at the regional & int'l levels
- Framing a space code – a natural corollary
- India has obvious interests in a code

State of the Regime

- Disagreement among some of the major powers – major hindrance in shaping space norms
- Given the stagnation at the CD,
 - Consensual principle to derive a code may not be feasible
 - Need to look at alternate venues similar to the ICAO model
 - Grouping among the established space powers to frame the rules
 - Institutionalisation of dialogues – bilateral, regional and multilateral – Track I and Track II – to shape appropriate norms for int'l coop and space developmental activities

India and Int'l Space Code

- An overcrowded, congested and competitive space – potential for accidents – greater need for rules that guide state behaviour
- Increasingly securitised Asia and military modernisation – an added imperative
- Current treaties inadequate –
 - OST, 1967 – good measure but loopholes
 - PAROS UNGA Resolution: 1981 but CD yet to have a productive session on PAROS
 - Need for definitional clarity
- India – TCBMs good complimentary measures
- Insist on legally binding measures but willing to make a gradual shift from a normative exercise

India and Int'l Code, Contd.

- Important given the huge economic stakes involved
- India one of the earliest space powers
- Interested in writing rules that would bring about certain restraint
- Need for an inclusive mechanism
 - Absence of a consultative process – a sizeable number of countries believe that the EU Code is a western ploy to limit the activities of other spacefaring countries, including India
 - An arms control measure

India and the EU Code

- Highly idealistic
 - For e.g., Article 8.1: States shall provide information on national space policies and strategies, “including basic objectives for security and defence related activities in outer space.”
- States that endorse the code –prepare national “policies and procedures to minimize the possibility of accidents in space, collisions between space objects or any form of harmful interference with other States’ right to the peaceful exploration and use of outer space.”
 - Role of the great powers to make judgments about violations has not been credible

India and the EU Code, Contd.

- The EU Code being a voluntary measure lacks the teeth to enforce it, potentially making it ineffective
 - For e.g., H-COC
- Lack of a legal framework in addressing space security a lacuna
- Issues of verification further add complexities; No good way to verify space technologies, given that they are inherently dual-use in nature