

DEFSAT 2024

Draft Speech
(08-02-2024)

- It is with immense pride that I stand before you today to discuss India's remarkable journey in space and defence advancements. As we stride into the future, India is not just reaching for the skies; but it is conquering them. India's commitment to scientific exploration, technological innovation, and national security has propelled it into a league of nations synonymous with progress and excellence.

- DefSAT 2024, is ushering our nation into a new era of technological prowess and strategic significance. My heartfelt appreciation to SIA-India and the Defence Think-Tanks CENJOWS, CLAWS, CAPS, and NMF for organising this robust gathering. India is at the forefront of a transformative narrative, shaping its promising future in defence and space technology.

- From our first satellite 'Aryabhata' in 1975, to our most recent Aditya L1 which was India's debut mission to study the sun, our nation has proven that we are indeed 'Atma Nirbhar'. Our ability to design, develop, and launch satellites and interplanetary probes demonstrates a high level of technological competence. It further helps motivate our youth to contribute to science and study STEM (Science, Technology, Engineering, and Mathematics) education and research.

- India's space program, under the auspices of the Indian Space Research Organisation (ISRO), has achieved numerous milestones, making the nation a global player in space exploration. One of the most noteworthy accomplishments is the Mars Orbiter Mission, also known as Mangalyaan. Launched in 2013, Mangalyaan made India the first Asian nation to reach Martian orbit and the first nation in the world to do so on its maiden attempt. This achievement showcased not only India's technological prowess but also its ability to achieve space exploration on a frugal budget.

- The Indian Space Policy of 2023 aims to institutionalize private sector participation, with ISRO focusing on advanced space technologies. Projections indicate a substantial increase in India's share of the global space economy, from 2% to an impressive 10%.

- The SSA Observatory in Uttarakhand signifies a giant leap in India's space capabilities. This initiative aligns with our vision for a safer, more secure, and sustainable future. As we venture into this new era of space technology, we affirm our commitment to leading with vision, innovation, and dedication to shaping a better future for our nation in the realms of defence and space.

- Configuring a network of diverse space surveillance systems, becomes imperative. The increasing congestion in Earth's orbit, fueled by the growing number of satellites and space activities, demands comprehensive monitoring to avoid collisions and space debris. A diverse surveillance network, comprising ground-based radars, optical

telescopes, and space-based sensors, enhances the accuracy and reliability of tracking objects in orbit.

- Our strides in satellite technology, with a robust constellation of communication, weather, and earth observation satellites are at par with the world. These satellites play a crucial role in areas ranging from telecommunication to disaster management, contributing not only to the nation's development but also to global cooperation in addressing common challenges. It helps reach rural remote areas ensuring safety and security for all.

- The significance of satellites in defence cannot be overstated, providing unparalleled advantages in intelligence, information, surveillance, and communication. Military satellites, integral to communication and application-based systems, are essential components of strategic planning, particularly as India faces heightened tensions at its borders. The Defence Space Technology introduces new dimensions to invisible information-based warfare, shaping the landscape of future defence capabilities.

- India's commitment to ensuring its national security is reflected in the advancements made in defense technology. The Defense Research and Development Organization (DRDO) has been at the forefront of developing cutting-edge technologies to safeguard the nation. The successful development and induction of the Agni, Prithvi, and BrahMos missile systems demonstrate India's

capability to deter potential threats and protect its sovereignty.

- In recent years, India has also focused on enhancing its indigenous defense manufacturing capabilities. The "Make in India" initiative has catalyzed the production of critical defense equipment within the country, reducing dependence on foreign suppliers and fostering self-reliance. This move not only bolsters the economy but also strengthens the nation's defense infrastructure.

- The integration of SSA-specific sensors into our defence infrastructure is a significant stride towards fortifying our national security. Bridging the data gap observed between Australia and southern Africa, these sensors provide real-time information about space activities above the Indian subcontinent. This data is invaluable for defense preparedness, enabling us to stay ahead of potential threats and challenges.

- One of the most exciting aspects of India's progress is the synergy between its space and defense sectors. The development of anti-satellite (ASAT) capabilities showcases India's ability to protect its assets in space. This capability is not only a deterrent but also a testament to India's commitment to securing its interests in an era where space plays a crucial role in communication, navigation, and surveillance.

- Moreover, India's space-based assets contribute significantly to defense strategies. Satellite imagery aids in reconnaissance, surveillance, and monitoring, providing

real-time data to enhance situational awareness. The integration of space-based technologies with defense operations exemplifies India's forward-looking approach in utilizing advancements for national security.

- Secure space communication systems are pivotal for safeguarding sensitive information and ensuring the integrity, confidentiality, and availability of data transmitted through space channels. These systems play a crucial role in military and defense applications, protecting classified communications from interception or tampering by unauthorized entities.

- In the context of international collaboration in space exploration, secure communication facilitates the exchange of scientific data, technical information, and research findings, fostering cooperative efforts while safeguarding national interests.

- India's space and defense missions play a crucial role in advancing several Sustainable Development Goals (SDGs). Through the deployment of remote sensing satellites, India contributes to SDG 2 (Zero Hunger) by empowering farmers with valuable insights for efficient crop management, reducing food insecurity.

- The utilization of space-based technologies further aligns with SDG 3 (Good Health and Well-being) as it aids in healthcare services, facilitating disease mapping, early outbreak detection, and timely responses to health crises.

- The provision of telecommunication and satellite-based internet services supports SDG 4 (Quality Education) by expanding educational opportunities, especially in remote areas, fostering access to quality education and e-learning resources.
- India's space endeavors also contribute to SDG 6 (Clean Water and Sanitation) by utilizing earth observation satellites to monitor water resources, ensuring sustainable water management.
- The indigenous development of space and defense technologies not only aligns with SDG 9 (Industry, Innovation, and Infrastructure) but also fosters innovation, contributing to industrial growth and creating a foundation for sustainable infrastructure. Overall, India's commitment to space and defense missions significantly contributes to the global pursuit of sustainable development across various sectors and goals.
- But, our space and defense advancements have not occurred in isolation; they are marked by a spirit of international collaboration. The nation actively participates in joint space missions, shares satellite data with neighboring countries for disaster management, and collaborates on research and development projects with various nations. This cooperative approach not only fosters goodwill but also strengthens global efforts in addressing shared challenges such as climate change, natural disasters, and the peaceful use of outer space.
- As we embark on these transformative initiatives, we recognize that technology is not just a means to an end; it

is the catalyst for progress, security, and sustainable development. The fusion of data, analytics, and navigation capabilities propels us into a future where our nation stands at the forefront of innovation, influencing global narratives in defense and space technology.

- While India has achieved commendable success in space and defense, it faces challenges that require continued dedication and innovation. The fast-evolving nature of technology and the geopolitical landscape necessitate constant vigilance and adaptation. Investing in research and development, nurturing talent, and fostering a culture of innovation will be key to overcoming future challenges.

- Looking ahead, India's ambitions are set even higher. The Gaganyaan mission, which aims to send Indian astronauts into space, exemplifies the nation's determination to explore new frontiers. Additionally, advancements in hypersonic technology and artificial intelligence are poised to revolutionize defense capabilities, positioning India as a technological powerhouse on the global stage.

- In conclusion, India's journey in space and defense advancements is about determination, innovation, and a relentless pursuit of excellence. As the nation reaches for the skies, it not only secures its own future but also contributes to the progress of humanity. The collaborative spirit, technological prowess, and strategic vision showcased by India in these domains are a source of inspiration for nations around the world. Together, let us

celebrate India's achievements and anticipate an even brighter future as the nation continues to soar to new heights.

Jai Hind!

- Annexe 1:
- Names of distinguished personalities on stage: (To be confirmed with ADC office)
- Dr. Subba Rao Pavuluri,
- Dr. Samir V Kamat,
- Lt. Gen. PJS Pannu, Chairman of the Defence Space Committee at SIA-India;
- Mr. Deepak Mathur, Executive Vice President of SES Inc.