



drishti

China's Commercial Carrier Rockets

 drishtias.com/printpdf/china-s-commercial-carrier-rockets

- China has recently unveiled its **new generation of commercial carrier rockets** which could carry up to 1.5-tonne of payload.
- The new rocket series comprises of small space rockets:
 - **Solid-fuelled** rockets codenamed as the **Smart Dragon** (SD) family (The SD rocket family is made up of the SD-1, 2, and 3 launch vehicles), and
 - **Tenglong-** the **liquid-propellant** rocket (which will make its first flight in 2021).
- This move can be seen in the backdrop of the fact that China gears up to compete with India to attract the lucrative global space launch market.
 - According to an article published in 2017 in the Global Times, 'China's space industry is lagging behind that of India in the commercial space industry.'
 - The Chinese rockets will have to create a niche for themselves in the satellite market where the **Indian Space Research Organisation (ISRO)** has already gained a foothold.
 - To provide impetus to the space sector, India has recently established **New Space India Limited (NSIL)** whose mandate is to use research and development carried out by ISRO over the years for commercial purposes through Indian industry partners.
 - ISRO's tried and trusted **Polar Satellite Launch Vehicle (PSLV)** has till now launched **297 foreign satellites** and has various variants, which are meant for carrying different-size payloads and to different orbits.
 - According to a new market intelligence report by BIS Research, the global small satellite market generated a revenue of \$513.6 million in 2018 and is expected to reach \$2.9 billion by 2030.

- Another path-breaking revolution that is underway is the **small satellite revolution**.
 - Globally, 17,000 small satellites are expected to be launched between 2019 till 2030.
 - ISRO is developing a **Small Satellite Launch Vehicle (SSLV)** that is expected to be ready in 2019.
 - It is a prime candidate, along with the proven PSLV, to be farmed out to the private sector.
 - Besides the PSLV and upcoming SSLV, ISRO has also started using the **fourth stage of the rocket** for carrying nanosatellite or experimental modules of private parties for experimental purposes.
 - **Antrix-** ISRO's **commercial arm**, had generated revenue of over ₹ 2,000 crore in 2017-18, which is likely to double in five years.
 - Developments in Artificial Intelligence (AI) and big data analytics has led to the emergence of **'New Space'**.

Way Forward

- India's achievements are largely driven by its **low-price advantage** which primarily is a weak point for China's commercial space sector.
- Keeping that in mind, these new set of China's rockets are expected to meet the requirements of the overwhelming majority of launch missions for domestic and foreign commercial satellites.
- So with increasing competition, complexity and demand for space-related activities, there is a growing realization that national legislation is needed to ensure the overall growth of the space sector. A New Space law for India should aim at facilitating growing India's share of the global space economy in the coming decade.

Source: ET