

Q → Amidst the pandemic, India has to stay competitive enough in the space sector in order to provide efficient services to its customer. Analyse.

A → India has ^{an} established & credible space program led by Indian space Research Organization (ISRO), but the covid pandemic has put India's space activities in suspension while other nations have effectively promoted it.

Comparisons

- ↳ India's share in space related activities remain a miniscule 1.8%, while US & China continue to dominate it.
- ↳ Many nations including smaller ones like Tunisia, Slovenia, Monaco have launched their 1st satellites.
- ↳ Iran carried out its 1st-ever space launch on indigenous launch vehicle while China launched the first module of its space station in the low-earth orbit. (LEO)

These events show that there is a "Gold Rush" phenomenon occurring in space sector & India must not lag behind.

Government efforts to boost space sector

A PSU, New Space India Ltd. was created by Dept. of space to bridge gap between ISRO & Pvt. sector

formation of Indian National Space Promotion & Authorisation centre (IN-SPACe) to act as coordinator between ISRO & Pvt. sector by hand holding & guiding these entities to enter space technology arena.

These steps have led to investment of more than \$30M in space startups.

Issues faced by Pvt. sector & ISRO

↳ Slow development of ISRO's second-largest launch vehicle GSLV-MK-II has halted ISRO-NASA joint project as well as India's 1st manned space mission, Gaganyaan.

↳ It is a highly risky business involving negative return & failures for private sector so ^{no} big corporates have ventured in this sector

↳ Inadequate finances as ISRO already functions on shoe-string budget & pandemic has further magnified this issue.

Way forward

↳ ~~Set~~ Constitute a clear cut, well-defined policy so that relationship between ISRO & private sector is smooth & complementary

in nature.

- ↳ ISRO must urgently acquire SSLV credentials
- ↳ Similar to NASA - Federal Aviation Administration synergies, a joint DOS - DGCA national synergy can help make this sector market oriented & ready for commercial, military, civilian & experimental space launches

The participation of priv. sector with ISRO is a must for giving a much needed boost to space sector & making India self-reliant or Atmanirbhar Bharat