

Indian Data Relay Satellite System (IDRSS)

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Context: (ISRO) has announced that it aims to launch its own satellite pair for space communication purposes, called Indian Data Relay Satellite System (IDRSS).

- It will have two satellites, which will be deployed in phases
- The first of the two satellites will be launched into low-Earth orbit by the end of 2020, ahead of the unmanned Gaganyaan test flight that will also carry a humanoid dummy onboard, laden with sensors.
- The second satellite will be launched in 2021, before the manned mission is embarked upon in 2022.
- IDRSS will be pivotal in maintaining communication with the astronaut crew and ground mission control at any given phase, during manned space missions Gaganyaan
- The only alternative is to set up ground control stations all across the Earth, but even that comes with considerable obstructions and roadblocks. IRDSS will help ISRO's ground control room to uniformly monitor the space crew and communicate with them at any given point of time, and can be used in both low orbit missions and farther missions such as those to the moon, Mars and beyond.

Other

- The USA presently has a three-satellite communication fleet in space, known as Tracking and Data Relay Satellites (TDRS).
- Russia, another space major, already has a 10-satellite communication system, known as Satellite Data Relay Network (SDRN).

- The European Space Agency (ESA) also has the European Data Relay System (EDRS),
- China also maintains its Tianlian space communications infrastructure.