The Intergovernmental Negotiating Committee (INC) on plastic pollution.

- The Intergovernmental Negotiating Committee (INC), under the United Nations Environment Programme, met in Nairobi from November 13 to 19 for its third round of negotiations to develop an international legally binding instrument to end plastic pollution worldwide.
- Under the UN Environment Assembly Resolution 5/14, the INC is responsible for delivering a global plastics treaty by 2025.
- The INC3 was a make or break opportunity as countries came together to negotiate the 'zero draft' text developed by the committee's secretariat, with various options for core obligations and control measures
- **What does the 'zero draft' say?**
- The zero draft as prepared by the secretariat contained strong options for an international legally binding treaty to end plastic pollution.
- Most countries agreed that the treaty's objective should be to end plastic pollution and protect human health and the environment.
- But a group of likeminded countries including Saudi Arabia, Russia, China, Iran, and some members of the Gulf Cooperation Council argued to include the clause "while contributing to the achievement of sustainable development", to ensure their economic interests and investments.
- The most important provision, that is a reduction in the production of primary polymers, also stirred controversy because of its implications for industry.
- plastic pollution can be managed only with strong, concrete measures at each stage throughout the lifecycle of plastics, many countries disagreed where the life cycle begins.
- While this would ideally mean that it begins at the point of sourcing raw materials for production, some countries argued that the life cycle starts at product design.
- Similarly, the same group objected to including provisions pertaining to eliminating compounds and polymers of concern and problematic and avoidable plastics, which are key in ending plastic pollution, and called for a 'null option' despite broad agreement from other countries that were pushing for a binding agreement
- The zero draft contains options such as imposing a plastic pollution fee to

be paid by plastic polymer producers, and another on reducing the financial flow into projects with a high carbon footprint.

- Countries will have to cut, if not eliminate, fossil fuel subsidies and investments in environmentally disfavourable technologies such as incineration and waste to energy plants.
- The WTO rules provide for sufficient scope for trade restrictions when they are "necessary to protect human, animal or plant life or health" and nothing prohibits states under international law to regulate or restrict the trade of certain products and materials.
- The group of likeminded countries rejected every single upstream measure, and diluted midstream measures with the inclusion of voluntary measures and phrases such as "national circumstances", "national priorities", "bottom up approach" etc.
- Excluding the provision on waste management, in fact, almost all other provisions were watered down to account for "national circumstances and capabilities".
- Even under waste management, there is a high risk of these countries insisting on the treaty accommodating unsound solutions.

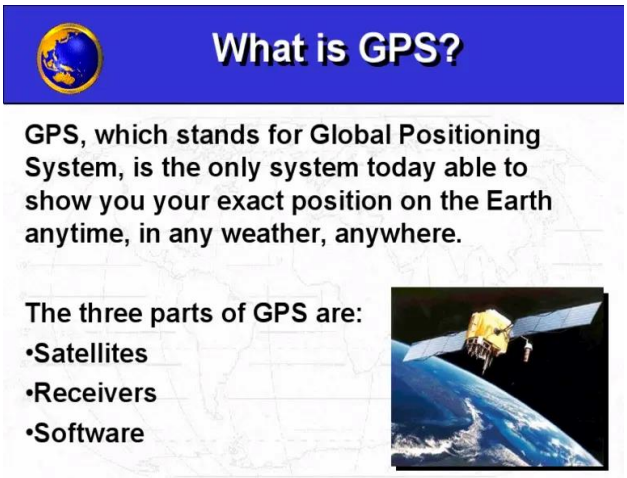
GPS Working

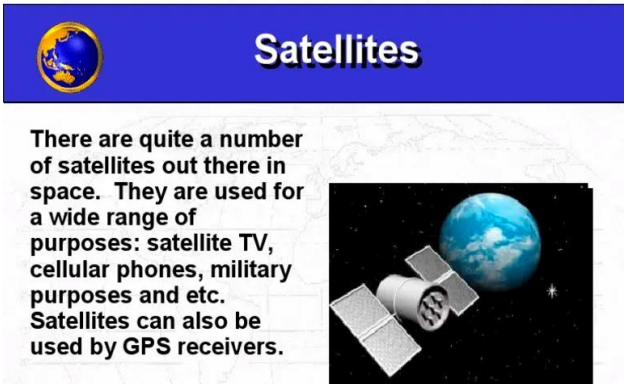
What is GPS?

The U.S. Department of Defence started the GPS programme in 1973 and launched the first satellite in 1978.

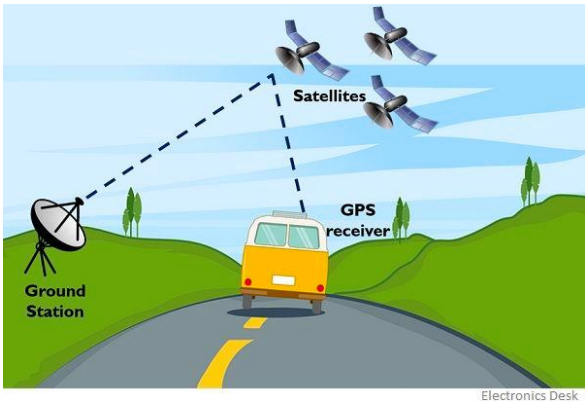
The modern GPS satellite constellation consists of 24 satellites moving around the earth in six orbits.

Each satellite completes two orbits in a single day.

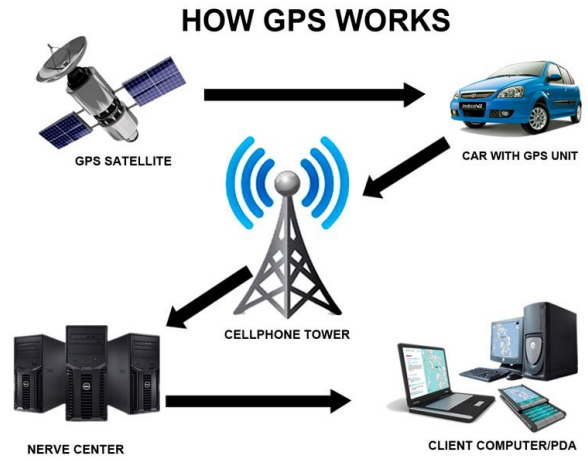




Current Affairs 6th December 2023 by Saurabh Pandey



Electronics Desk



- **The overall programme has three main components the space segment, the control segment, and the user segment.**
- **The space segment, of course, consists of the 24 satellites.**
- **The six orbits they occupy are all 20,200 km above the earth, and each orbit has four satellites at all times**
- **The control segment consists of a global network of ground based control stations and antennae that track the 24 satellites, make sure their performance is as expected at all times, and transmit commands.**
- **The services provided by the GPS system are designed to meet the Standard Positioning Service (SPS) performance standard, the latest edition of which was published in April 2020.**
- **The control segment ensures these commitments are kept.**
- **The master control station is located at Schriever Air Force Base, Colorado, and the alternate master control station is at the Vandenberg Air Force Base, California.**
- **The ground antennae are in Florida (Cape Canaveral), Ascension Island, Diego Garcia island, and Kwajalein Atoll**
- **The user segment pertains to the use of GPS in various sectors and applications.**
- **The major sectors include agriculture, construction, surveying, logistics, telecommunications, power transmission, search and rescue, air travel, meteorology, seismology, and military operations.**

How does GPS work?

- **Each GPS satellite continuously broadcasts a radio signal containing information about its location in orbit, operational status, and the time at which the signal is emitted.**

- The signals are transmitted at the L1 (1,575.42 MHz) and the L2 (1,227.6 MHz) frequencies at 50 bits/second.
- The signals are encoded with code division multiple access.
- This allows multiple signals to be transmitted in the same channel and for a receiver to be able to disentangle them.
- There are two encoding types: the coarse/acquisition mode, which civilians can use to access coarse GPS data, and the precise mode, which is encrypted and is for military use. Being an electromagnetic signal, the radio waves travel at the speed of light
- The clocks onboard the modern day GPS constellation are all synchronised to within just 10 nanoseconds of each other, and with reference clocks on the ground.
- **Do other countries have GNSS?**
- According to the U.S. Space Based Positioning, Navigation, and Timing Policy, the GPS system will cooperate with the operation of other GNSS. Such systems are currently operated by Australia, China, the European Union, India, Japan, South Korea, Russia, and the U.K. Of these, Russia's GLONASS, the E.U.'s Galileo, and China's Beidou systems are global.
- There is also an International Committee on GNSS, operating under the United Nations Office of Outer Space Affairs.

NAVIC

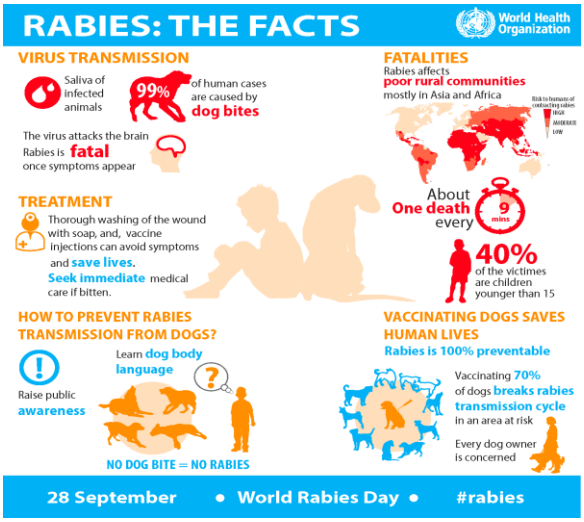
- India mooted its own Indian Regional Navigation Satellite System in 2006, later rechristened Navigation with Indian Constellation (NavIC).
- Its space segment consists of seven satellites: three in geostationary orbits and four in geosynchronous orbits.
- As of May 2023, the minimum number of satellites (four) could facilitate ground based navigation.
- The master control facilities are located in Hassan in Karnataka and Bhopal in Madhya Pradesh.
- The NavIC satellites use rubidium atomic clocks and transmit data in the L5 (1,176.45 MHz) and the S (2,492.028 MHz) bands, with newer satellites also transmitting in the L1 band.
- They include a messaging interface that can receive messages from control stations and transmit them to specific areas, like warning fishers

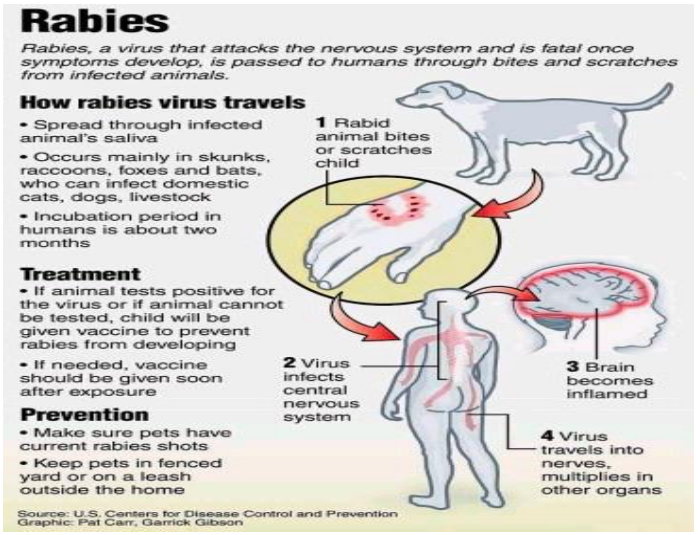
about being close to international borders, etc.

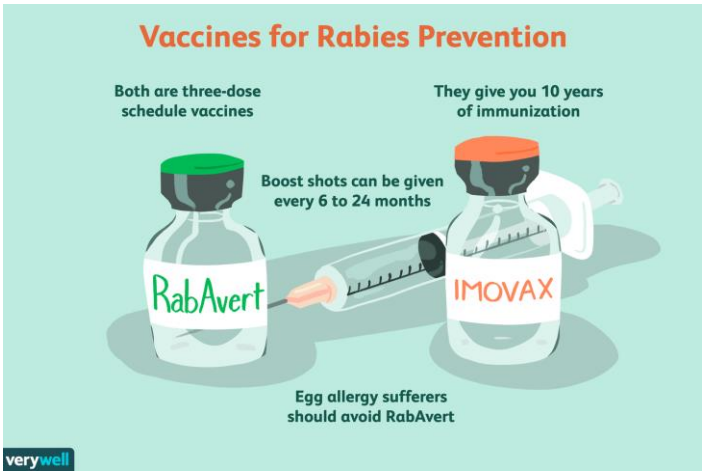
- India also operates the GPS Aided Geo Augmented Navigation (GAGAN) system, which was developed by the ISRO and the Airports Authority of India.

- According to the ISRO website, GAGAN's primary purpose is "safety of life civil aviation applications catering to the Indian airspace" and for providing "correction and integrity messages for GPS".

Rabies







Global stock take

- For the first time, a key document being negotiated at the UN's annual climate summit has underlined the need for the world to do away with all fossil fuels, in its draft text.

- As the first week of negotiations at COP28 nears an end, the latest version of the Global Stock take (GST) includes a clause committing all

signatories to "an orderly and just phase out of fossil fuels"

Global Stocktake (GST)

- It is a comprehensive assessment of the world's progress on climate action.
- It refers to a five-year review in which countries assess where they are in the fight against climate change, and what needs to be done in the next five years to make this fight more effective and potent.
- Anchored in Article 14 of the Paris Agreement, it is intended to inform Parties to the Agreement on their progress against its goals, including but not limited to limiting global temperature rise to 1.5°C.
- COP28 will witness the presentation of the findings of the first stocktake exercise.
- GST will be an opportunity to put accountability at the heart of climate negotiations.