Why the 5G Rollout in the US is Causing Airline Cancellations

Why in news?

Top US airlines wrote to the Biden administration stating that 5G services deployment around airports should be banned because it may interfere with sensitive airplane instruments.

What is the issue?

- Frequencies within the C-band being used for the 5G services are near airwaves used for aviation communication.
- Deploying 5G around airports may interfere with sensitive airplane instruments such as altimeters and significantly hamper low-visibility operations.
- Following this, several airlines around the world including Air India have curtailed flights to the US. As a temporary measure
- AT&T and Verizon voluntarily limited 5G deployment near certain airports.

What is 5G network?

- 5G refers to 5th generation mobile network that will represent a quantum leap over the current 4G mobile networks.
- 5G networks could deliver 10 times faster internet.
- There is more than 10 times improvement in latency (the time difference between sending and receiving messages) over 4G.
- 5G is expected to reduce latency to 1 millisecond.
- 5G has the potential to unleash a whole range of services in terms of scale and precision
- **Applications**
    - Mass deployment of autonomous cars
    - Drones for delivery
    - Remote healthcare
    - Precision agriculture
    - Virtual reality
    - Industrial automation

What are the concerns raised by US airlines?

- 5G is being rolled out in over 40 countries but so far only the US airlines have raised concerns.
- Generally, all airlines ask passengers to switch off their phones during take-off and landing because of concerns related to interference with avionics.
- But so far, this concern has only been on paper because mobile operators and airlines have been using different frequency bands.
- But in the US, since both telecom companies and airlines use the **C-band**, there could be a **higher probability of interference**.
- There have been discussions over how the transition should take place in the US for years.
- The telecom companies and the aviation industry are yet to arrive at an agreement.
- **Challenges**- In the US, only the last 20 seconds of flight are protected from any interruption from 5G signals compared to 96 seconds in France.
- Also, 5G power levels are lower in France, but in the U.S., it is expected to be 2.5 times more powerful.
- The airlines may resume normal operations soon as the telecom operators have voluntarily decided to stop 5G deployment near airports as a temporary measure.

What will be the impact on India's aviation sector?

- India is yet to auction 5G spectrum, and services are expected to be launched only by next year.
- So far none of the airlines have raised any issues with the proposed plan for spectrum auction.
- The Federation of Indian Pilots has sent a letter to the Civil Aviation Minister urging that the Directorate General of Civil Aviation and the TRAI ensure safe implementation of 5G services in C Band.
- The national broadcaster Prasar Bharti which uses it for its services has raised objections to the use of a specific frequency band for 5G.
- At the time of rolling 3G and 4G services in India, the armed forces and the space agency had claimed rights to specific frequency bands.
- But these differences were sorted out by the TRAI and the Wireless Planning and Coordination wing of the Department of Telecom.

References

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