Cell Broadcast System (CBS)

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Why in News?

The Centre for Development of Telematics (C-DOT) has successfully deployed the Cell Broadcast System (CBS) to reinforce India's disaster management capabilities, shifting the Framework from reactive to proactive.

CBS - Is a state-of-the-art mobile communication technology designed to deliver un-queued emergency messages to all mobile devices within a specific geographical area. Unlike traditional SMS, it is a one-to-many service.

Functions

- **Mechanism -** Messages are sent from a central platform to designated Base Transceiver Stations (BTS) (cell towers), which then broadcast the alert to every handset within their signal radius.
- **No Queuing -** Unlike Point-to-Point SMS (which can be delayed by network congestion), CBS messages reach all users simultaneously.
- **Network Independence -** It does not require the sender to know the recipient's phone number; it only requires the device to be connected to the targeted tower.

Features

- **Precise Geo-Targeting -** Can disseminate alerts at the level of a single neighborhood, an entire state, or the whole nation.
- **Indigenous Technology -** Entirely designed and manufactured within India by C-DOT.
- **Priority Notifications -** Alerts appear as a pop-up on the screen, bypassing other apps, accompanied by a distinct loud siren tone.

Inclusivity

- **Multilingual -** Supports regional languages for local understanding.
- **Read-Aloud -** Assists visually impaired users through text-to-speech.

Significance for Disaster Management

- **Proactive Response -** Specifically designed for "sudden-onset" disasters like flash floods, gas leaks, and earthquakes.

- **Lead Time -** Provides critical seconds/minutes for protective action, significantly reducing potential casualties.
- **Official Channel -** Strengthens national security by providing a direct, verified government-to-citizen communication link.

C-DOT (Centre for Development of Telematics)
• Established in 1984 • It is the premier R&D centre of the Department of Telecommunications under Ministry of Communications.

For Reference: PIB | IAS Parliament

