



Controlled Aerial Delivery System

Why in News

Recently, a flight demonstration of the **Controlled Aerial Delivery System of 500 kg capacity (CADS-500)** was conducted by Aerial Delivery Research and Development Establishment (ADRDE).

- The flight demonstration is part of a series of activities organised towards celebrating '[Azadi Ka Amrit Mahotsav](#)', commemorating **75 years of Independence**.



Key Points

- **About:**
 - The CADS-500 is **used for precise delivery of payload upto 500 kgs** at predetermined location by making use of manoeuvrable capabilities of **Ram Air Parachute (RAP)**.
 - It uses the [Global Positioning System](#) for the coordinates, altitude and heading sensors for the heading information during its flight.
 - The CADS, with its **onboard electronics unit**, autonomously steers its flight path using waypoint navigation towards target location by operating controls.

Positioning System

- A positioning system is a **tool to determine the location of an individual or object**. The technology requires global coverage and sharp accuracy to achieve the exact location.
 - **For Example:** 'Google Maps' is one of the positioning and navigation systems that helps individuals to find their exact location as well as a path to their destination. However, the system only offers a satellite view of the region under navigation.

Global Positioning System (GPS)

- GPS is a **satellite navigation system**, used to determine the ground position of an object. It is a **U.S.-owned utility** that provides users with positioning, navigation, and timing (PNT) services.
- It is a **network 24 satellite** which provides service to civilian and military users. The civilian service is freely available to all users on a continuous, worldwide basis. The military service is available to U.S. and allied armed forces as well as approved Government agencies.

- **ADRDE:**

- It is an Research & Development laboratory of the **Defence Research and Development Organisation (DRDO)**.
- It is involved in the **development of paratrooper parachute systems**, aircrew parachute systems, ammunition parachute systems, brake parachute, recovery parachute systems, aerial delivery parachute systems, heavy drop systems, inflatable systems, airship technologies and aircraft arrester barrier systems.
- Currently, **it is involved in projects** such as armament delivery parachutes, balloon barrage and surveillance systems, airships and related applications and space recovery parachutes.

Source: PIB

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