



## HAL Ties Up HENSOLDT For Tech Transfer

### Why in News?

**Hindustan Aeronautics Ltd (HAL)** will provide **Maintenance, Repair and Overhaul (MRO) services** for engines of US's MQ-9B Remotely Piloted Aircraft System as India is in discussions to buy **30 MQ-9B drones** to enhance its surveillance capabilities **along the China border and the Indian Ocean region.**

- In another announcement, **Germany based HENSOLDT and HAL** announced a collaboration agreement covering design/IPR Transfer for design and manufacturing of **Obstacle Avoidance System (OAS)** for Indian helicopters.

### What is the MQ-9B Sea Guardian?



- The MQ-9B Sea Guardian has changed the game in maritime domain awareness. It's the first unmanned aerial system of its kind that can search the **ocean surface and the depths in support of naval intelligence**, surveillance and reconnaissance.
- It is designed to fly over the horizon via **SATCOM** for up to 30 hours (depending on configuration) in all types of weather.
- General Atomics Aeronautical Systems, Inc (GA-ASI) of US is the manufacturer of the MQ-9Bs.
- **Indian Navy** operates two **MQ-9B Sea Guardians** taken on lease in 2020.

### What are the Highlights Related to Tech-Transfer Between India and Germany?

- **HAL** and **HENSOLDT** will collaborate on the design and manufacturing of **Obstacle Avoidance Systems (OAS)** for Indian helicopters, primarily the **Advanced Light Helicopter (ALH)**, with potential future exports.
  - The **OAS system will provide smart visual cues to pilots** to reduce their workload, increasing flight safety, and mission effectiveness, particularly in crucial mission phases

under adverse visual conditions.

- The system is a [LiDAR-based sensor](#) with **synthetic vision** and 3D conformal symbology to **detect objects and terrain**, providing assistance to the pilot through safety lines, enhancing situational awareness to increase flight safety.

## What is LiDAR Technology?

- LiDAR, or **light detection and ranging**, is a popular **remote sensing method** used for measuring the exact distance of an object on the earth's surface.
- LiDAR uses a pulsed laser to calculate an object's variable distances from the earth surface.
  - These light pulses — put together with the information collected by the airborne system — **generate accurate 3D information** about the earth surface and the target object.

[Source:TH](#)

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