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## Systems Handed Over to Defence Services

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### Why in News

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Recently, the **Defence Minister** has handed over the **Indian Maritime Situational Awareness System (IMSAS)**, **ASTRA Mk-I** and **Border Surveillance System (BOSS)** to the Navy, Air Force and Army respectively.

- The **Defence Research and Development Organisation (DRDO)** laboratories have **indigenously developed these three systems** which will lead to higher self-reliance in defence technologies.
- The Defence Minister has also given away **awards to DRDO scientists for outstanding contributions** in various categories.

### Key Points

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- **Indian Maritime Situational Awareness System (IMSAS):**
  - It is a **state-of-the-art and high performance intelligent software system** that provides **Global Maritime Situational Picture, marine planning tools** and **analytical capabilities** to Indian Navy.
  - It also provides **Maritime Operational Picture** from naval headquarters to each individual ship in sea to enable naval command and control.
  - **Centre for Artificial Intelligence and Robotics (CAIR)**, Bengaluru and Indian Navy has **jointly conceptualised** and developed the product and **Bharat Electronics Limited (BEL)**, Bengaluru has implemented it.

- **ASTRA Mk-I:**
  - It is the indigenously developed **first Beyond Visual Range (BVR) Missile**, which can be launched from **Sukhoi-30, Light Combat Aircraft (LCA), Mig-29** and **Mig-29K**.  
Globally, very few countries have expertise and capabilities to design and produce this class of weapon system.
  - The missile is **designed to engage and destroy highly manoeuvring supersonic aircraft**. The missile has **all weather day and night capability**.
  - Successful development of ASTRA weapon system by **Defence Research and Development Laboratory (DRDL)** Hyderabad and production by **Bharat Dynamics Limited (BDL)**, Hyderabad is a major contribution towards **Atmanirbhar Bharat**.
- **Border Surveillance System (BOSS):**
  - It is an **all-weather electronic surveillance system** successfully designed and developed by **Instruments Research and Development Establishment (IRDE)**, Dehradun.
  - The system has been **deployed at Ladakh border** area for day and night surveillance and facilitates monitoring and surveillance by **automatically detecting the intrusions in harsh high-altitude sub-zero temperature areas** with remote operation capability.
- **Awards for Outstanding Contributions:**
  - **DRDO Lifetime Achievement Award, 2018:**  
Awarded to N V Kadam for his contributions for developing control and guidance schemes for missiles.
  - **Excellence awards** were given to **academia and industry** for technology absorption.
  - Besides, individual awards, team awards, technology spin-off awards, techno managerial awards and **awards in other categories were also given**.

**Source: PIB**