

# Iron Dome Air Defence System: Israel

### Why in News

Israel used its Iron Dome air defence system in recent violent clashes over Jerusalem.

## **Key Points**

#### About:

- It is a short-range, ground-to-air, air defence system that includes a <u>radar</u> and Tamir interceptor missiles that track and neutralise any rockets or missiles aimed at Israeli targets.
- It is **used for countering** rockets, artillery & mortars as well as aircraft, helicopters and Unmanned Aerial Vehicles (UAV).
  - It is capable of being **used in all weather conditions**, including during the day and night.
- It was developed by the state-run Rafael Advanced Defense Systems and Israel Aerospace Industries and was deployed in 2011.
- Rafael claims a success rate of over 90%, with more than 2,000 interceptions, however experts agree the success rate is over 80%.
- It can **protect** deployed and manoeuvring forces, as well as the **Forward Operating Base (FOB)** and urban areas, against a wide range of indirect and aerial threats.

#### Components:

- The Iron Dome has **three main systems that work together** to provide a shield over the area where it is deployed which are:
- **Radar:** It has a detection and tracking radar to spot any incoming threats.
- Weapon Control: It has a battle management and weapon control system (BMC),
- Missile Fire: It also has a missile firing unit. The BMC basically liaises between the radar and the interceptor missile.

# **ISRAEL'S IRON DOME DEFENCE SYSTEM**

Mobile system to intercept rockets with range of 4-70km



• About:

- It is a **double-tiered system consisting of two land and sea-based interceptor missiles**, namely the **Prithvi Air Defence (PAD)** missile for high altitude interception, and the **Advanced Air Defence (AAD)** Missile for lower altitude interception.
- Range:
  - It is able to intercept any incoming missile launched 5,000 kilometres away. The system also includes an overlapping network of early warning and tracking radars, as well as command and control posts.
- Ashwin Advanced Air Defence Interceptor Missile:
  - About:
    - It is also an indigenously produced Advanced Air Defence (AAD) interceptor missile developed by <u>Defence Research and Development Organisation</u> (<u>DRDO</u>).
    - It is the advanced version of the low altitude supersonic ballistic interceptor missile.
    - The missile also has its own mobile launcher, secure data link for interception, independent tracking and homing capabilities and sophisticated radars.
  - Range:
    - It uses an endo-spheric (within the Earth's atmosphere) interceptor that knocks out ballistic missiles at a maximum altitude of 60,000 to 100,000 feet, and across a range between 90 and 125 miles.

#### Source: IE

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