



Israel's Air Defence System

[Source: IE](#)

Why in News?

Recently, Israel's multi-layered air defence system defended the country from a major attack, as Iran launched over 300 armed drones and long-range missiles.

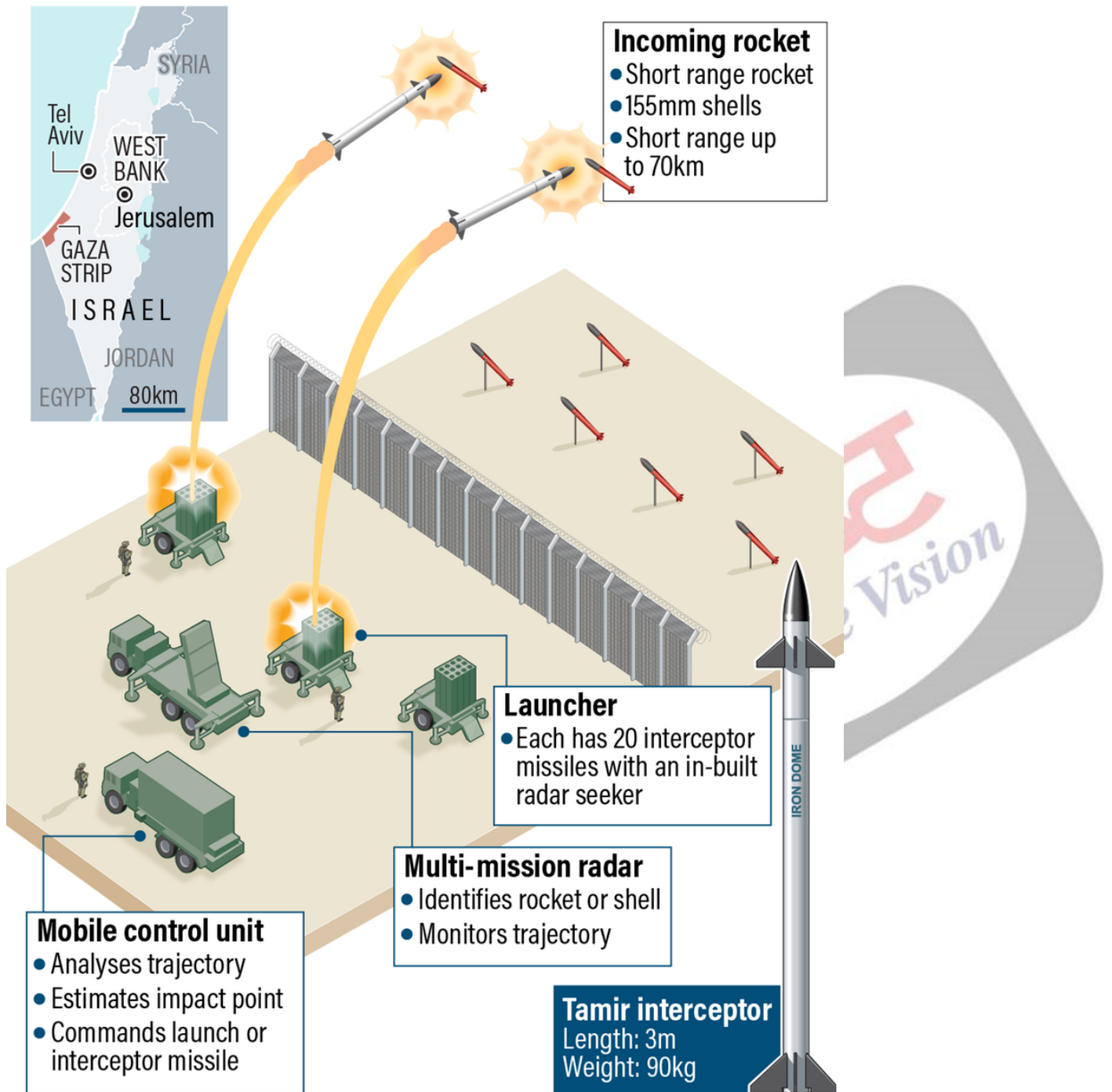
What are the Key Facts About Israel's Air Defense System?

- **Air defence systems** are basically shields against threats from the sky. They are a combination of different technologies that work together to **spot, track, and destroy** incoming aircraft, missiles, or drones.
 - Israel's air defense system consists of **Iron Dome** and **C-Dome**.
- **Iron Dome:**
 - It is a **short-range, ground-to-air, air defence system of Israel**.
 - The Iron Dome has **three main systems** that work together to provide a shield over the area where it is deployed.
 - **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.
 - 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 **claims a success rate of over 90%**.
 - 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.

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ISRAEL'S IRON DOME DEFENCE SYSTEM

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



▪ C-Dome:

- It is a **naval version** of [Israel's Iron Dome](#) air defence system, used to shield against rocket and missile attacks.
- It was **first unveiled in 2014** and declared operational in November 2022.
- It works similarly to the Iron Dome, except that it is mounted on ships.
- It is **mounted on Sa'ar 6-class corvettes, and German-made warships**, and uses the **same interceptor** as the Iron Dome.
 - Unlike the Iron Dome, which has its dedicated radar, the C-Dome is integrated into the ship's radar to detect incoming targets.

- It ensures **full-circular vessel protection** and **high kill probability** against a full spectrum of modern threats—maritime and coastal.

Similar Air Defense System of India:

▪ Indrajaal:

- **India's first indigenous drone defence dome** called "**Indrajaal**" was designed and developed by **Hyderabad-based technology R&D firm Grene Robotics**.
- It has the capability to **autonomously protect an area of 1000-2000 sq km** against the aerial threats by assessing and acting on aerial threats such as Unmanned Aerial Vehicles (UAVs), loitering munitions, and Low- Radar Cross Section (RCS) targets.
- It will not only provide protection to defence bases but it will be **beneficial for linear infrastructures like international borders** against advanced weaponry.

▪ S-400 Triumf Missile System:

- The **S-400 Triumf** is a **mobile, surface-to-air missile system (SAM)** designed by **Russia**. It is one of the most dangerous operationally deployed **modern long-range SAM (MLR SAM)** in the world, considered much ahead of the [US-developed Terminal High Altitude Area Defense System \(THAAD\)](#).
- The system can **engage all types of aerial targets** including aircraft, unmanned aerial vehicles (UAV) and ballistic and cruise missiles **within a range of 400km, at an altitude of up to 30km**.
- The system **can track 100 airborne targets** and engage six of them simultaneously.

Read More: [Iron Dome](#), [Israel-Palestine Conflict](#)

UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q 1. Which one of the following countries of South-West Asia does not open out to the Mediterranean Sea? (2015)

- (a) Syria
- (b) Jordan
- (c) Lebanon
- (d) Israel

Ans: (b)

Mains:

Q1. 'Too little cash, too much politics, leaves UNESCO fighting for life.' Discuss the statement in the light of US' withdrawal and its accusation of the cultural body as being 'anti-Israel bias'. **(2019)**

Q2 . "India's relations with Israel have, of late, acquired a depth and diversity, which cannot be rolled back." Discuss. **(2018)**

