Israel's Iron Dome intercepting rockets

What is the issue?

- Air strikes and rocket attacks are witnessed from both sides in the recent Israel-Palestine conflict.
- Videos on social media showed rockets fired from Gaza being intercepted by the Israeli Iron Dome air defence system; here is a look at the features of an Iron dome.

What is the Iron Dome?

- It is a short-range, ground-to-air, air defence system.
- It includes a radar and Tamir interceptor missiles that track and neutralise any rockets or missiles aimed at Israeli targets.
- It is used for countering rockets, artillery & mortars (C-RAM or counter-RAM) as well as aircraft, helicopters and unmanned aerial vehicles.

How does it work?

- The Iron Dome has three main systems.
- They work together to provide a shield over the area where it is deployed, handling multiple threats.
- It has –

1. a detection and tracking radar to spot any incoming threats
2. a battle management and weapon control system (BMC)
3. a missile firing unit

- The BMC basically liaises between the radar and the interceptor missile.
- It is capable of being used in all weather conditions, including during the day and night.
- Each battery, or the full unit, can cost over $50 million, and one interceptor Tamir missile costs around $80,000.
- In contrast, a rocket can cost less than $1,000.
- The system dispatches two Tamir missiles to intercept each rocket.

When was it first used?

- The genesis of the Iron Dome goes back to the 2006 Israeli-Lebanon war,

when the Hezbollah fired thousands of rockets into Israel.

- The following year, Israel announced that its state-run Rafael Advance Systems would come up with a new air defence system to protect its cities and people.
- It was developed with Israel Aerospace Industries.
- The Iron Dome was deployed in 2011.

How does India compare with Israel in this regard?

- Israel, along with the US and Russia, is the leader in this air defence system.
- India is in the process of buying S-400 air defence systems from Russia for over $5 billion.
- In this backdrop, the Iron Dome was one of the systems that was being spoken of.
- Israel does have S-400, which also caters to the three threats (rockets, missiles and cruise missiles). But they have much longer range.
- While India is continent-sized, Israel is smaller and has to deal with threats that are relatively close around it and hence the Iron dome.
- At the moment, India has Akash short-range surface-to-air missiles, and Russian systems including Pechora.
- India is also buying two National Advanced Surface to Air Missile System-II from the US.

Source: The Indian Express

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