RaIDer-X: Explosive Detection Device

Why in News

An **explosive detection device, RaIDer-X,** was unveiled at the National Workshop on Explosive Detection (NWED-2020) in Pune (Maharashtra).

> The Workshop was organized by the **High Energy Materials Research Laboratory (HEMRL), Pune.**

Key Points

- RaIDer-X has the capability to detect 20 explosives within a distance of about 2 metres. Bulk explosive in concealed condition can also be detected by the device.
- The data library can be built in the system to expand its capability to detect a number of explosives in pure form as well as with the contaminants.
- The device has **various applications** including narcotics, for local police, for customs and other detection agencies who need to detect various elements which may be explosive or non-explosive in nature.
- RaIDer-X has been **co-developed by HEMRL, Pune and the Indian Institute of Science, Bangalore.**

High Energy Materials Research Laboratory, Pune

- HEMRL Pune is a **premier laboratory of the Defence Research and Development Organisation (DRDO.)**

- It is involved in basic and applied research in the area of **high energy materials.**
    - **High energy materials** are compounds which store chemical energy. Such materials, on stimulation by mechanical, thermal or electrical devices, undergo rapid decomposition giving out heat, light, sound and large volumes of gases.
    - The amount of energy released varies with the properties of the material such as composition, structure, density, heat of formation and decomposition, etc.
    - **Examples:** Propellants used in rockets, pyrotechnics used in festivities, explosives used for military purposes, blasting chemicals used in construction activities, etc., are high energy materials.

Source-PIB