Medicine from the Sky Project: Telangana

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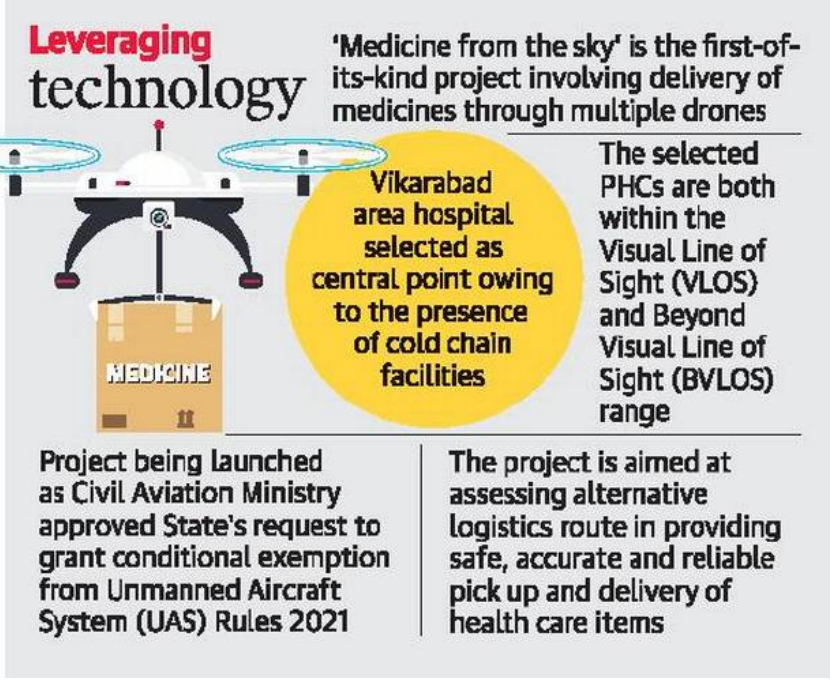
Why in News

Recently, the Telangana government has selected 16 Primary Healthcare Centres (PHCs) for pilot testing the ambitious **'Medicine from the sky',** the **first-of- its-kind project.**



Key Points

- **About:**
  - The project **involves delivery of medicines through multiple drones.**
  - The project is being launched following the **approval granted by the Civil Aviation Ministry.**
    - The Ministry has granted **conditional exemption** to the Telangana Government from the **Unmanned Aircraft System Rules 2021** for conducting experimental **Beyond Visual Line of Sight (BVLOS)** drone flights for delivery of vaccines.
  - The project **would be launched in three waves** starting with a pilot followed by mapping the route network for operation of drones for delivering vaccine/medicine in the desired community health centres and PHCs.
- **Collaborators:**
  - Telangana government, **World Economic Forum** and HealthNet Global.
    - **HealthNet Global** is a **private limited company** which provides quality affordable health plans for individuals, families, Medicare and businesses.
- **Aim:**
  - To assess **alternative logistics routes** in providing **safe, accurate and reliable pick up and delivery of health care items** like medicines, **Covid-19 vaccines**, units of blood and other lifesaving equipment **from the distribution centre to specific locations and back.**
  - To ensure **healthcare equity for rural areas.**
- **Significance:**
  - The model, once successful, would **enable deliveries from district medical stores and blood banks to PHCs, Community Healthcare Centres (CHCs)** and further **from PHCs/CHCs to central diagnostic laboratories.**
  - It has the **potential to disrupt the healthcare industry and save many lives** during emergencies and in less accessible geographies.
- **Other Projects involving Use of Drones:**
  - Similar permission was granted to the **Indian Council of Medical Research (ICMR)** for **conducting feasibility study of Covid-19 vaccine delivery using drones,** in collaboration with IIT-Kanpur.
  - The **International Crops Research Institute (ICRISAT)** was **permitted to deploy drones for agricultural research activities,** apart from some agriculture universities and educational institutions.

Drones

- Drone is a layman terminology for **Unmanned Aircraft (UA).** There are **three subsets of Unmanned Aircraft-** Remotely Piloted Aircraft, Autonomous Aircraft and Model Aircraft.

- Remotely piloted aircraft have been divided into **five categories based on their weight-**
    - **Nano :** Less than or equal to 250 grams.
    - **Micro :** From 250 grams to 2kg.
    - **Small :** From 2 kg to 25kg.
    - **Medium :** From 25kg to 150kg.
    - **Large :** Greater than 150kg.
- Under the **Drone Regulation in 2018**, the Ministry of Civil Aviation partitioned the Air space into **Red Zone** (flying not permitted), **Yellow Zone** (controlled airspace), and **Green Zone** (automatic permission).

Beyond Visual Line of Sight

- **About:**
    - It is a term relating to the operation of Unmanned Aerial Vehicles (UAVs) and drones at **distances outside the normal visible range of the pilot.**
    - BVLOS flights typically **require additional equipment and extra training and certification,** and are subject to permission from aviation authorities.

        Unmanned Aircraft System Rules 2021 states that **drones will not be allowed to operate BVLOS,** which would **limit the use of these gadgets to surveys, photography, security** and various information gathering purposes.
- **Advantages:**
    - They are more **cost-effective and efficient,** as there are fewer takeoff and landing phases, so the UAV will cover more ground in a single mission.
    - BVLOS flights **require less human intervention** as some or all of the missions may be automated. They may also allow **easier access to remote or hazardous areas.**
    - BVLOS capabilities **enable a drone to cover far greater distances.**
- **Risk:**
    - These operations **carry more safety concerns due to the fact that the pilot may only be observing potential obstacles** via a remote camera feed, or, in the case of automated flights, there may be no human observation at all.
    - There is a risk of **collisions with other aircraft, or damage to property and people,** especially when flights take place in non-segregated airspace.

Source:TH