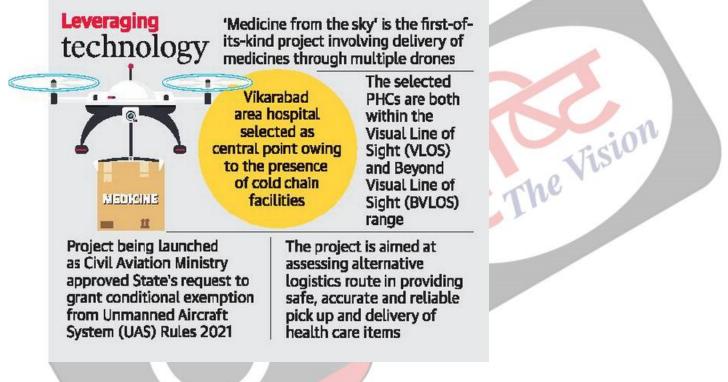
Medicine from the Sky Project: Telangana

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 <u>Unmanned Aircraft System Rules</u> **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, <u>Covid-19 vaccines</u>, 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 <u>Indian Council of Medical Research (ICMR)</u> 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 <u>Drone Regulation in 2018</u>, 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.

The Vision

Source:TH

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