SLCR Project in Varanasi

Why in News?

Recently, The Green Strategic Partnership between the Governments of India and Denmark has facilitated major cooperation, resulting in the establishment of the **Smart Laboratory on Clean Rivers (SLCR) in Varanasi.**

Key Points

- It is a unique tripartite initiative between the **Government of India (Department of Water Resources, River Development and Ganga Rejuvenation),** the Indian Institute of Technology - Banaras Hindu University (IIT-BHU), and Government of Denmark, to bring excellence in small river rejuvenation and management.
- The SLCR seeks to restore the Varuna River using sustainable methods.
    - Its goals include establishing a collaborative platform for government agencies, academic institutions, and local communities to exchange knowledge and devise solutions for maintaining clean river water.
    - The initiative includes a hybrid lab model at IIT-BHU and a living lab on the Varuna River to test and scale solutions in real-world environments.
- The **Indo-Danish Joint Steering Committee (JSC)** is the highest forum for SLCR which provides strategic guidance and reviews progress.
- The **Project Review Committee (PRC**), with members from National Mission on Clean Ganga (NMCG), Central Water Commission (CWC), Central Ground Water Board (CGWB), **IIT-BHU and Denmark's Urban Sector Counsellor will oversee quality control at project level.**
- **Four projects** to be taken up under the collaboration. These are:
    - The First project involves creating a **Decision Support System (DSS) for water management,** designed to analyze basin water dynamics using hydrological models, scenario generation, forecasting, and data analytics.
    - The second project focuses on the **characterization of emerging pollutants and fingerprint analysis.** It will use advanced analytical techniques, such as chromatography and mass spectrometry, to identify and quantify contaminants.
    - The Hydrogeological Model of the Varuna Basin for Recharge Sites will be the fourth project. It aims to **enhance base flow through** Managed Aquifer Recharge (MAR).

Varuna River

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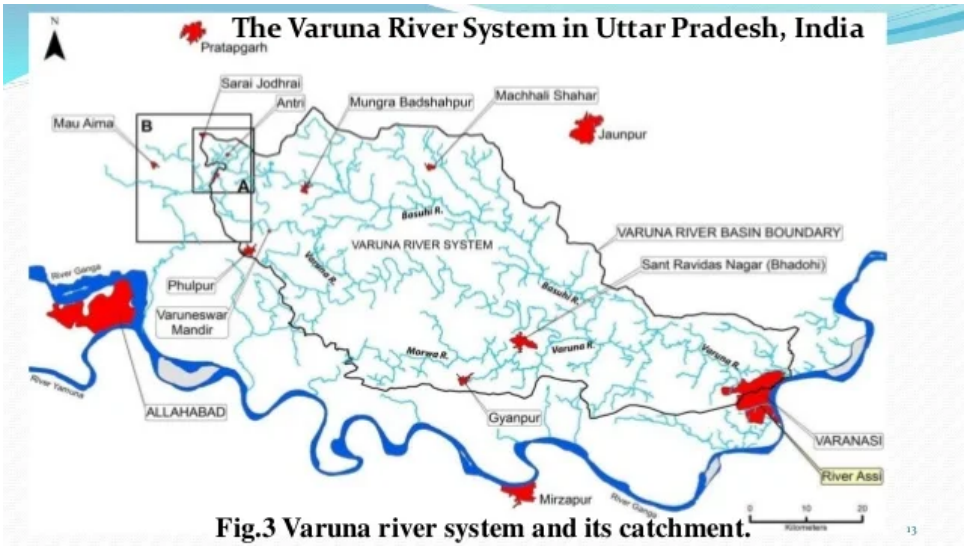

Fig.3 Varuna river system and its catchment.

- It is a **Minor Tributary of the** Ganga River. It **rises from** Phulpur town in the **Prayagraj district.**
    - It **flows into the Ganges river** near Sarai Mohana village **in the Varanasi district.**
- The **name 'Varanasi' district is derived from** the names of Two rivers, **Varuna and Assi rivers.**