Aravali Green Wall Project | Haryana | 05 Dec 2024

Why in News?

At a United Nations climate event held as part of the United Nations Convention to Combat Desertification Data (UNCCD) CoP16, India highlighted its ambitious 'Aravali Green Wall' project, emphasizing the importance of adopting innovative approaches to restore degraded forest lands on a global scale.

Key Points

- **About the Aravali Green Wall Project Presentation:**
  - Inspired by Africa's Great Green Wall initiative, the Aravali Green Wall project aims to-
    - Restore over **1.1 million hectares of degraded landscapes** by 2027.
    - Focus on afforestation with native species, soil health improvement, and groundwater replenishment.
    - Develop an "ecological wall" to mitigate urban heat islands and act as a carbon sink for NCR.
- **Significance of the Aravali Hills:**
  - The Aravali range acts as a natural barrier preventing the eastward spread of the Thar Desert.
  - It serves as a "repository of unique flora and fauna" but is facing severe challenges, including land degradation and desertification, encroachment, mining, **and** urbanisation.
- **Need for Restoration:**
  - Urgent action is required to address these threats and reverse the degradation.
  - The restoration effort involves **collaboration among Haryana, Delhi, Rajasthan, and Gujarat.**
- **Implementation Strategy:**
  - **State governments will plant millions of native trees and shrubs** and promote soil conservation.
  - The **first phase in Haryana will involve the revival of 66 water bodies** in key districts, including Gurgaon, Faridabad, and Bhiwani.
    - Haryana's plan covers the restoration of 35,000 hectares, with 18,000 hectares in Gurgaon alone.
- **Global Appeal and Vision:**
  - **Global partnerships** involving governments, international organisations, and private entities are called to **support the initiative with technical and financial resources.**
  - The project **aims to serve as a "blueprint" for global efforts** to restore degraded landscapes.
- **Innovative Approaches:**
  - The project incorporates **nature-based solutions,** focusing on afforestation with indigenous species, Soil health and moisture rejuvenation, Community participation in conservation.

Aravali Mountain Range

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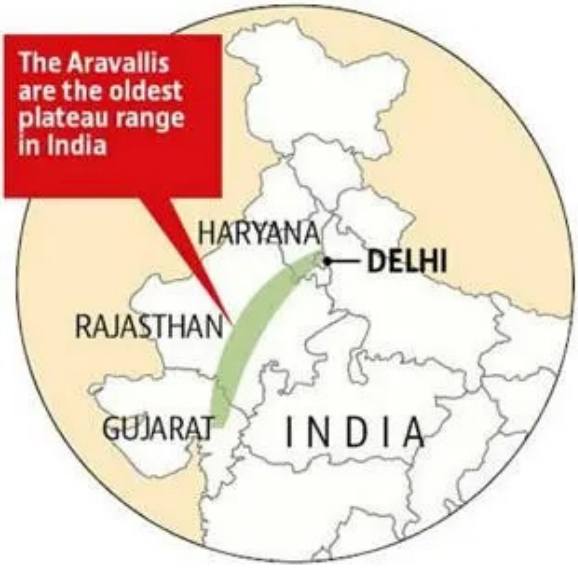

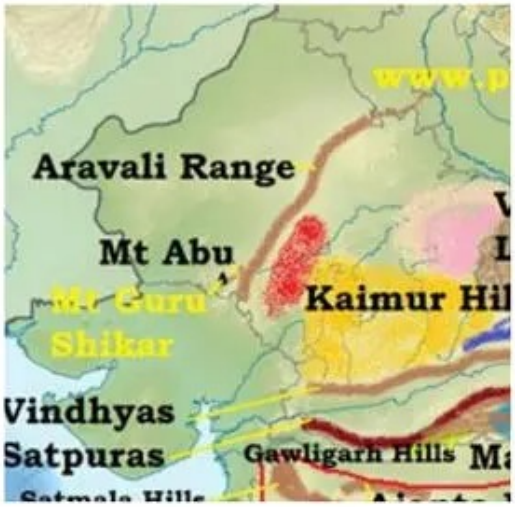

- The Aravallis, is the **oldest fold mountains on Earth.** Geological studies indicate that it is three billion years old.
- It spans over **800 km from Gujarat to Delhi** (through Rajasthan and Haryana).
- The **highest peak** in the Aravalli Range is **Guru Peak on Mount Abu.**
- **Influences Climate:**
  - The Aravallis have an impact upon the climate of northwest India and beyond.
  - During monsoons, the mountain range gently guides the monsoon clouds eastwards towards Shimla and Nainital, thus **helping nurture the sub-Himalayan rivers and feeding the north Indian plains.**
  - During the winter months, it **shields the fertile alluvial river valleys of the Indus and Ganga** from the harsh **cold westerly winds blowing in from Central Asia.**

Groundwater Extraction in Haryana | Haryana | 05 Dec 2024

Why in News?

The Stage of Groundwater Extraction (SoE) in Haryana has reached **135.74%,** signifying that the rate of **groundwater extraction exceeds the sustainable utilization limit.**

Key Points

- **Current State of Groundwater Extraction:**
  - **Haryana**
    - **Annual Groundwater Recharge**: 9.55 billion cubic metres (bcm)
    - **Annual Extractable Groundwater**: 8.69 bcm
    - **Total Groundwater Extraction (2023):** 11.8 bcm
    - **SoE**: 135.74%, indicating that extraction exceeds sustainable levels.
  - **Punjab**
    - **Annual Groundwater Recharge:** 18.84 bcm
    - **Annual Extractable Groundwate**r: 16.98 bcm
    - **Total Groundwater Extraction (2023)**: 27.8 bcm

            - **SoE**: Exceeds sustainable levels, with extraction higher than what can be sustainably used.
        - **Rajasthan**
            - **Annual Groundwater Recharge**: 12.45 bcm
            - **Annual Extractable Groundwater:** 11.25 bcm
            - **Total Groundwater Extraction (2023):** 16.74 bcm
            - **SoE:** 148.77%, indicating a significant over-extraction compared to recharge.
- **Groundwater Depletion Concerns:**
    - **Environmental Degradation**: When groundwater levels drop, saltwater can intrude into coastal areas, contaminating freshwater resources.
    - **Groundwater Contamination**: Human activities like agriculture, sewage, and industries can introduce pollutants like arsenic, fluoride, nitrate, and iron into groundwater.
    - **Land Subsidence:** When groundwater is overused, the soil can collapse, compact, and drop, causing land subsidence.
- **Policy Recommendations:**
    - The Ministry of Jal Shakti (MoJS) has urged states to reassess policies on providing **free or subsidised electricity to farmers.**
        - Introduce water pricing mechanisms to encourage sustainable use.
        - Implement crop rotation, diversification, and other measures to reduce dependency on groundwater.
- **Jal Shakti Abhiyan (JSA) Efforts:**
    - Since 2019, the Jal Shakti Abhiyan has been a mission-driven program focusing on rainwater harvesting and water conservation.
    - JSA 2024 is focused on 151 water-stressed districts across India.
