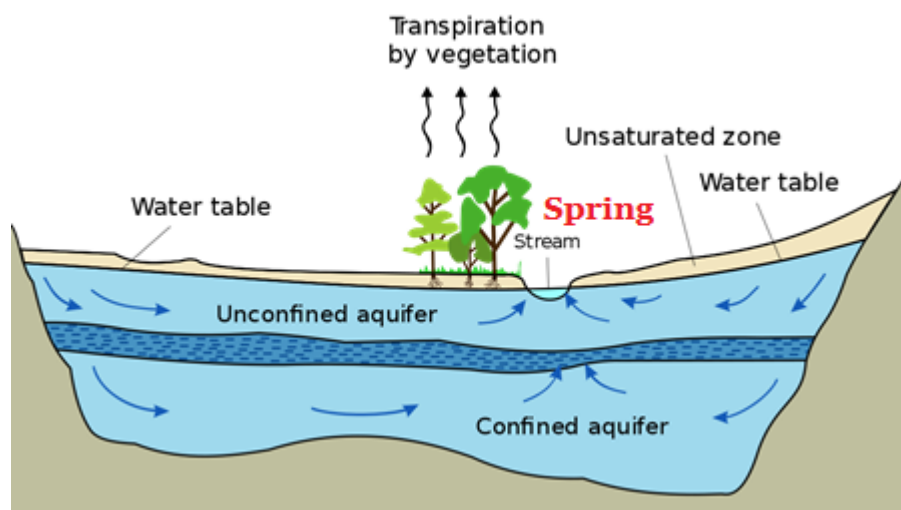


Reduction of springs in Himalayas

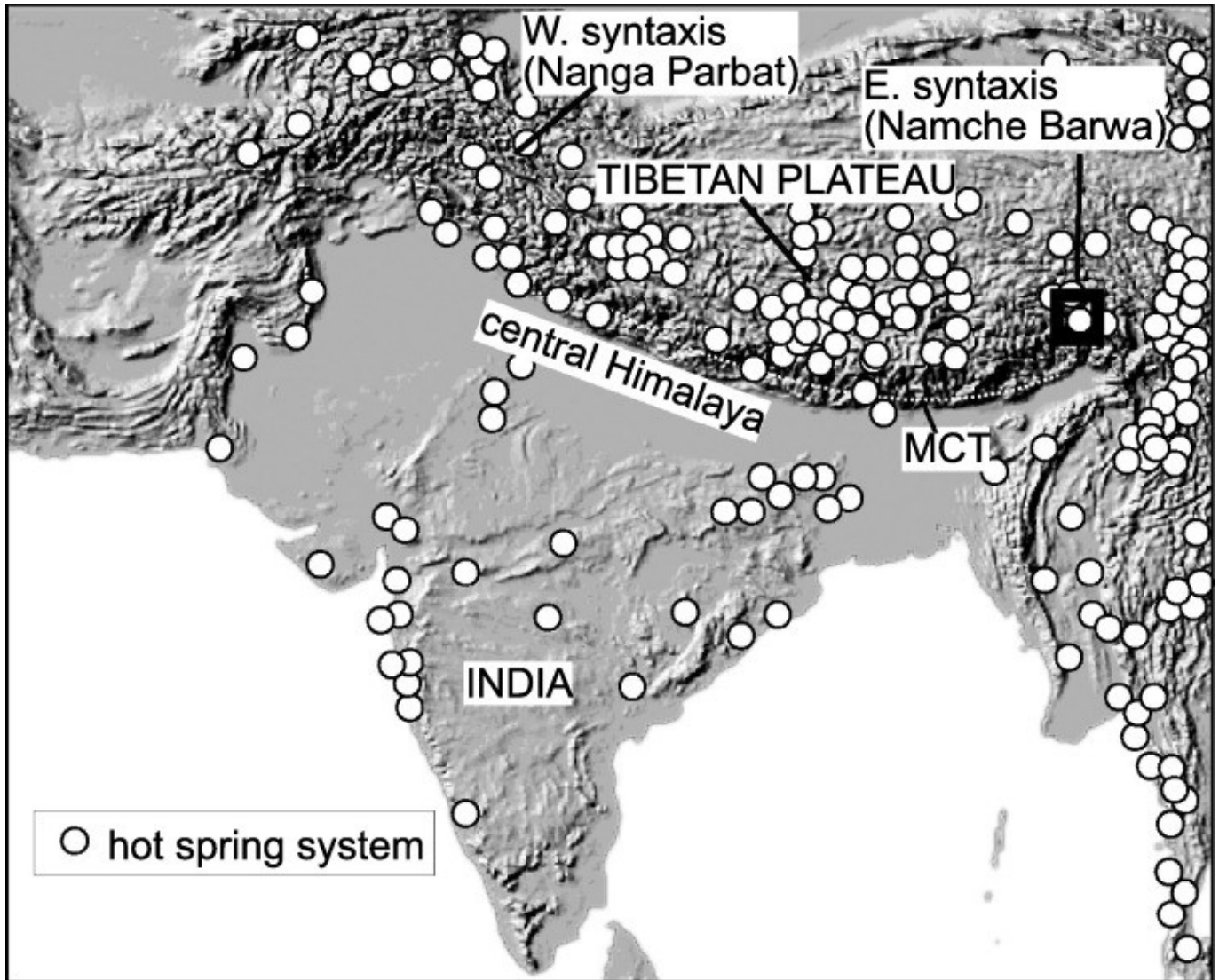
Why in news?

A Recent study showed that the spring system in Himalayan region, especially in Himachal Pradesh sees drop due to climate change

- **Springs** - It occurs when water pressure causes a natural flow of groundwater onto the earth's surface.
- **Mechanism** - As rainwater enters or "recharges" the aquifer, pressure is placed on the water already present.



- This pressure moves water through the cracks and tunnels within the aquifer, and this water flows out naturally to the surface at places called springs.
- **Hot springs** Spring with water at temperatures substantially higher than the air temperature of the surrounding region.
- **Causes of heating**
 - **Volcanic activity** - By shallow intrusion of magma
 - **Convective circulation** - Percolation of groundwater deep reaching hotter rocks
- **Hot springs of the Himalaya** - They are located in the zones of deep faults that define tectonic boundaries
 - **Indus Tsangpo Suture** - Between the Himalayan province and mainland Asia
 - **Main Central Thrust** - Between the Great Himalaya and Lesser Himalaya
 - **Main Boundary Thrust** - Between the Siwalik domain and the Lesser Himalaya



In the Eastern Himalayas Meghalaya has the most villages with springs, while Sikkim with the highest density. In the Western Himalayas, Jammu & Kashmir leads in both the number of villages and spring density.

- **Importance of springs** - Natural springs acts as a source of water for both *drinking and irrigation*.
 - **In Himalayan region** - It serves 64% of the cultivable land for irrigation.
- **Reduction in springs** - In the western Himalayas, over **45% have completely dried up** in the past 4 decades.
- Over **26% have become semi-active**, transitioning from perennial springs which depend on the monsoon.
- **Cause of decline of Spring**
 - Rising temperatures
 - Altered precipitation patterns
 - Decreasing snowfall and rainfall
- **Impacts** - The rural communities will face shortages in drinking water, agriculture, and daily household needs.

Reference

[The New Indian express| Climatic Impacts on spring in the Himalayas](#)

