Climate change-induced Snakebite Hotspots in India

Prelims – *Current events of national and international importance| Climate Change.*

Why in News?

Recently, a study published in PLOS Neglected Tropical Diseases reveals that climate change could significantly increase the geographical spread of venomous snakes in India.

- **Neglected Disease –** Snakebite is a neglected tropical disease like dengue and malaria, which are expanding in geographic reach due to climate change.
- Tropical and subtropical regions of the world experience a disproportionate impact of deaths due to a snakebite.
    - Cases in India are among the highest in the world.
- **Big Four Snakes –** The Four Species of Venomous snakes, such as ***Common krait, Russell's viper, Echis carinatus and Indian cobra***.
- These are responsible for the majority of snakebite cases among humans on the Indian subcontinent.
- **Climate Change –** Increased *heat and humidity* are creating favourable habitats for venomous snakes.
- It increases human-snake interactions across rural and urban areas could present new challenges for public health and medical management.
- **Recent findings – States likely to see spread** in Haryana, Rajasthan, Assam.
- Continued warming, northeast states, such as Manipur, Meghalaya, Nagaland, and Arunachal Pradesh considered to lack a habitat conducive for snakes.
- It shows notable increases of over 100 % snakebite risk.
- **Highly vulnerable states –** Karnataka (including Chikkaballapura, Haveri, and Chitradurga) and Gujarat (Devbhumi Dwarka and Jamnagar).
- **Northern and Northeastern states –** Rajasthan (Pratapgarh), Assam (Nagaon, Morigaon, and Golaghat), Manipur (Tengnoupal), have

experienced an increased risk of snakebite.

- **Snakebite Risk Index – It combines climate models, geographic spread, socio-economic vulnerability & healthcare capacity.**
- It shows climate change as a **looming public health crisis**, not just an environmental crisis.

Quick Facts

Neglected tropical diseases
• Neglected tropical diseases (NTDs) are a diverse group of conditions caused by a variety of pathogens, including viruses, bacteria, parasites, fungi and toxins and associated with devastating health, social and economic consequences. • NTDs are prevalent among impoverished communities in tropical regions, although some have a much larger geographical distribution. • **Diseases –** Buruli ulcer, Chagas disease, dracunculiasis, foodborne trematodiases, human African trypanosomiasis, rabies, scabies, soil-transmitted helminthiases, snakebite envenoming, taeniasis/cysticercosis, trachoma and yaws.

Reference

The Hindu| New Snakebite Hotspots in India.