



## Snakebite Envenoming

**For Prelims:** [Snakebite Envenoming](#), National Action Plan for Prevention and Control of Snakebite Envenoming (NAP-SE), [‘One Health’ approach](#), [World Health Organisation \(WHO\)](#), [Neglected Tropical Disease \(NTD\)](#)

**For Mains:** Snakebite Envenoming, One Health Approach

[Source: PIB](#)

### Why in News?

Recently, the Ministry of Health and Family Welfare has launched a **National Action Plan for Prevention and Control of Snakebite Envenoming (NAP-SE)**, under the [‘One Health’ approach](#).

### What is the National Action Plan for Prevention and Control of Snakebite Envenoming (NAP-SE)?

#### ▪ About:

- The NAP-SE provides a broad framework for **management, prevention and control of Snakebite** envenoming in India.
- This NAP-SE echoes the global voice of reducing the **deaths due to snakebite envenoming by half** and envisages all strategic components, roles and responsibilities of concerned stakeholders.
- The NAP-SE is a guidance document for the states/UTs and stakeholders to develop their **own action plan, specific to their needs and aims** at systematic reduction of snakebite envenoming risk through sustained availability of anti-snake venom, capacity building, referral mechanism and public education.

#### ▪ Aim:

- To prevent and **control snakebite envenoming** in order to **halve the numbers** of deaths and cases of disability that it **causes by 2030**.
- To progressively **reduce the morbidity, mortality** and its associated complications **in humans due to Snake bite**.

#### ▪ Strategic Actions:

- **Human Health:** The strategic action for human health component includes **ensuring provision of anti snake venom at all health facilities**, strengthening surveillance of snakebite cases and deaths in humans.
  - Strengthening of emergency care services at District Hospitals/ CHCs including services for ambulances, institutionalisation of Regional Venom Centre’s and inter-sectoral coordination.
- **Wildlife Health:** The strategic action for wildlife health component includes education awareness, **antivenom distribution**, strengthening of the key stakeholders, systematic research and monitoring and **snake venom collection and snake relocation**.
- **Animal and Agriculture Component:** The strategic action for animal and agriculture component includes **prevention of snakebites in livestock**, community engagement

etc.

## What is Snakebites Envenoming (SE)?

### ▪ About:

- Snakebite Envenoming (SE) is classified by the [World Health Organisation \(WHO\)](#) as a **High-Priority Neglected Tropical Disease (NTD)**.
- SE is a potentially life-threatening disease that typically results **from the injection of a mixture of different toxins** (venom) following the bite of a Venomous Snake.
  - It can also be caused by having **venom sprayed into the eyes by certain species of snakes** that have the ability to spit venom **as a defence measure**.
- Snakebite poses a significant **daily health risk in rural tropical and subtropical regions** of Africa, the Middle East, Asia, Oceania, and Latin America, particularly for the hundreds of millions of people in rural and peri-urban communities reliant on agriculture and subsistence activities for survival.

### ▪ Impact:

- Many snakebite victims, mostly in developing countries, suffer from long-term complications such as deformities, contractures, amputations, visual impairment, renal complications and psychological distress.

### ▪ Prevalence:

- **In India, around 50,000 deaths** occur of an estimated 3-4 million snake bites annually which accounts **for half of all snakebite deaths globally**.
  - **Only a small proportion of snake bite victims across countries report to the clinics** and hospitals and actual burden of snake bite is grossly underreported.
- As per the **Central Bureau of Health Investigation (CBHI)** reports (2016-2020), the average annual frequency of **snakebite cases in India is around 3 lakhs and about 2000 deaths occur due to snakebite envenoming**.
- In India, around **90% of snake bites** are caused **by the 'big four' among the crawlers** - common krait, Indian cobra, Russell's viper and saw scaled viper.

### ▪ WHO's Roadmap for SE:

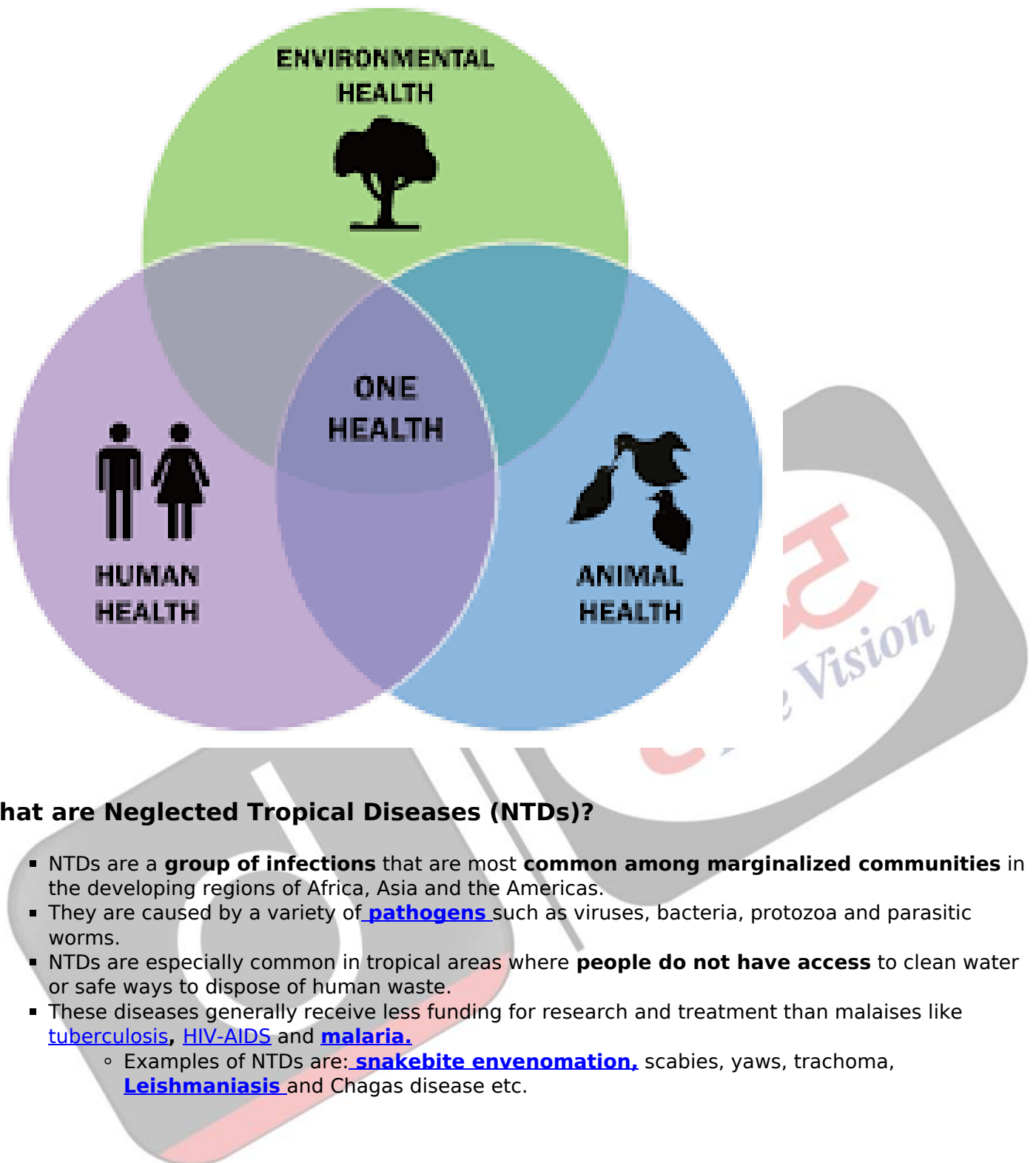
- WHO launched its **roadmap in 2019** with an aim **to halve death and disability from snakebite by 2030**.
  - In order to create a **sustainable market for antivenoms** there is a need for a **25% increase** in the number of competent manufacturers by 2030.
  - WHO has planned a **pilot project to create a global antivenom stockpile**.
  - Integrating snakebite treatment and response into national health plans in affected countries, including **better training of health personnel** and educating communities.

### ▪ Indian Initiatives:

- Much before the WHO roadmap was launched, researchers from [Indian Council of Medical Research \(ICMR\)](#) started **community awareness** and health system capacity building **from the year 2013**.
- In alignment with **WHO's Snakebite Envenoming Strategy** and the United Nations' Sendai [Framework for Disaster Risk Reduction](#), India ratified a National Action Plan in 2015 to combat this issue.

## What is the One Health Concept?

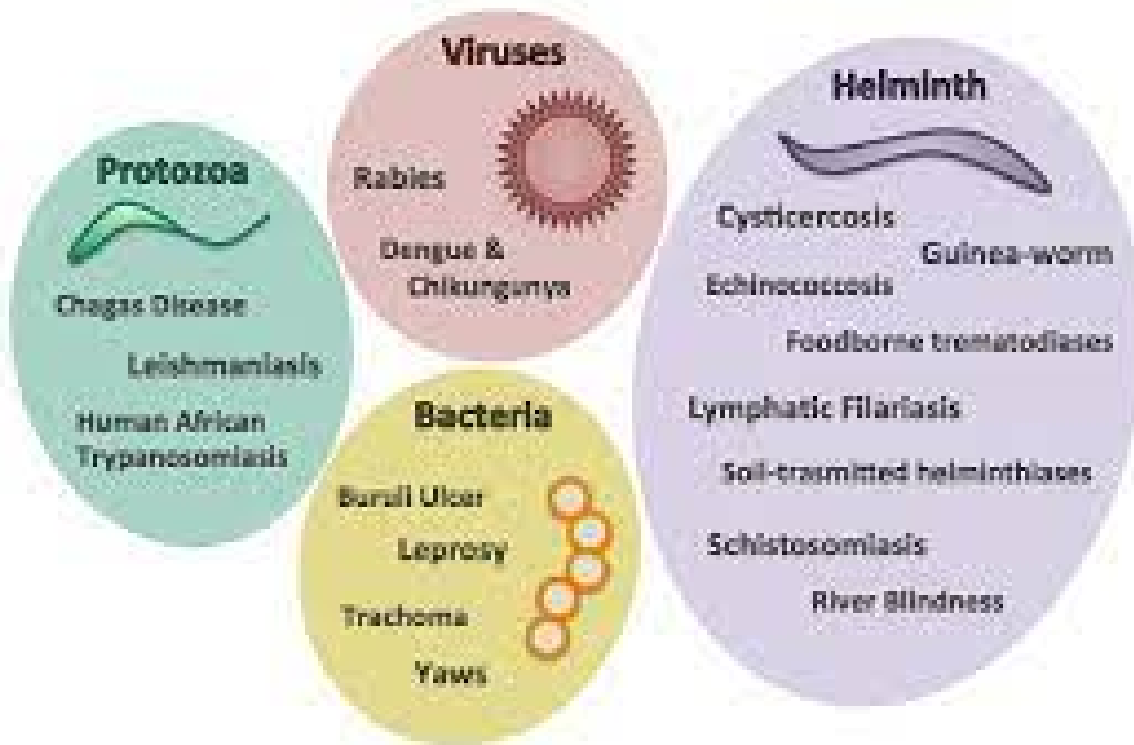
- One Health is an approach that recognises that the **health of people is closely connected to the health of animals and our shared environment**.
- One Health' vision derives its blueprint from the agreement between the **tripartite-plus alliance** comprising the [Food and Agriculture Organization of the United Nations \(FAO\)](#), the [World Organisation for Animal Health \(OIE\)](#).
- It's purpose is to **encourage collaborations in research** and sharing of knowledge at multiple levels **across various disciplines** like human health, animal health, plants, soil, environmental and ecosystem health in ways that improve, **protect and defend the health of all species**.



## What are Neglected Tropical Diseases (NTDs)?

- NTDs are a **group of infections** that are most **common among marginalized communities** in the developing regions of Africa, Asia and the Americas.
- They are caused by a variety of **pathogens** such as viruses, bacteria, protozoa and parasitic worms.
- NTDs are especially common in tropical areas where **people do not have access** to clean water or safe ways to dispose of human waste.
- These diseases generally receive less funding for research and treatment than malaises like **tuberculosis**, **HIV-AIDS** and **malaria**.
  - Examples of NTDs are: **snakebite envenomation**, scabies, yaws, trachoma, **Leishmaniasis** and Chagas disease etc.

## Neglected Tropical Diseases



Read more: [Snake Venom Neutralising Antibody](#)

### UPSC Civil Services Examination, Previous Year Question (PYQ)

#### Prelims

**Q. Which of the following are the reasons for the occurrence of multi-drug resistance in microbial pathogens in India? (2019)**

1. Genetic predisposition of some people
2. Taking incorrect doses of antibiotics to cure diseases
3. Using antibiotics in livestock farming
4. Multiple chronic diseases in some people

**Select the correct answer using the code given below.**

- (a) 1 and 2  
(b) 2 and 3 only  
(c) 1, 3 and 4  
(d) 2, 3 and 4

**Ans: (b)**

#### Mains

**Q. Can overuse and free availability of antibiotics without Doctor's prescription, be contributors to the emergence of drug-resistant diseases in India? What are the available mechanisms for monitoring and control? Critically discuss the various issues involved. (2014)**

PDF Reference URL: <https://www.drishtias.com/printpdf/snakebite-envenoming-3>

