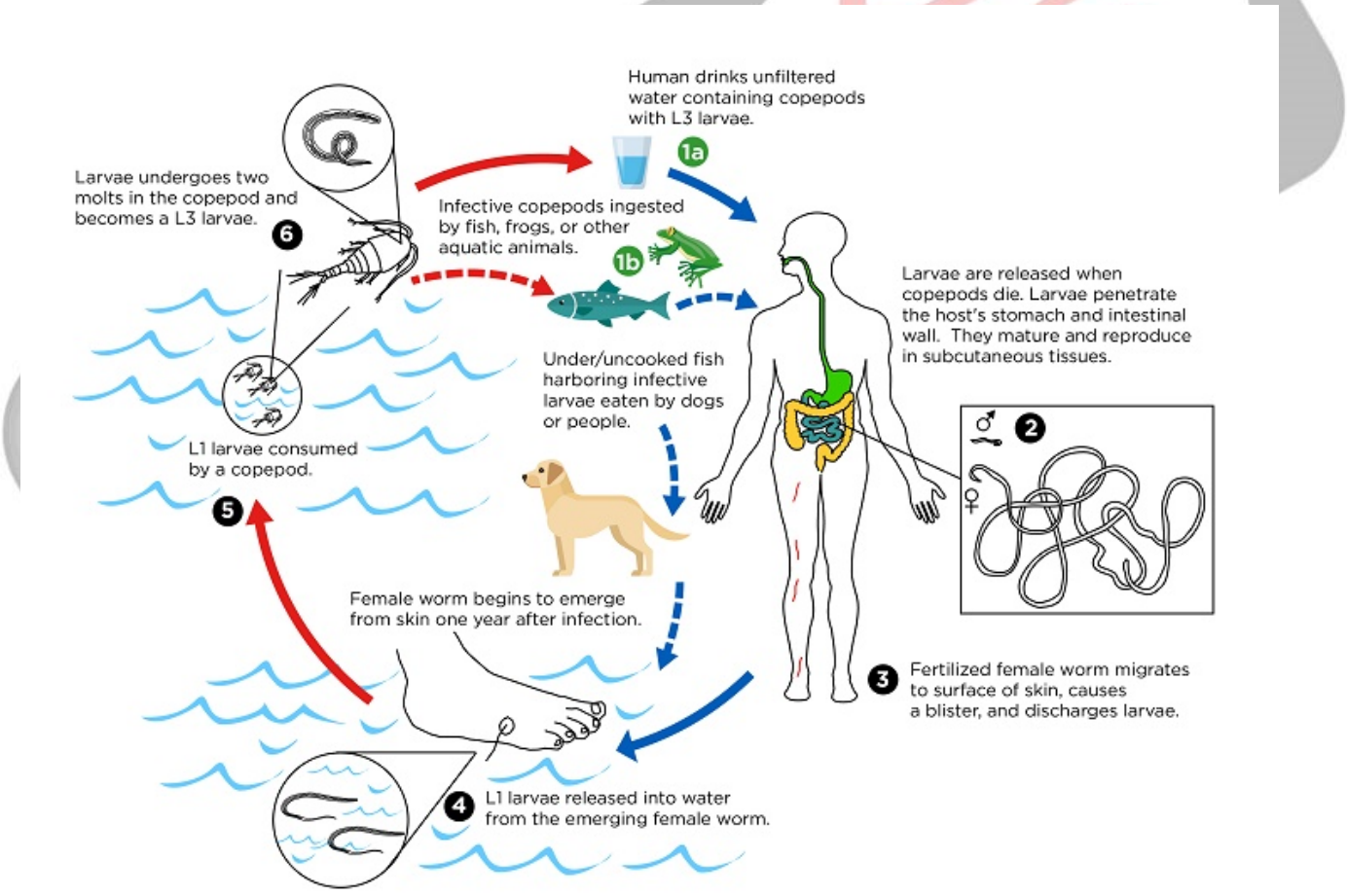
Guinea Worm Disease

Source: TH

Why in News?

Recently, the **World Health Organization's (WHO)** report has shed light on a remarkable milestone in global public health: **the imminent eradication of Guinea worm disease**.

- This **parasitic infection,** which **plagued millions in the 1980s,** has dwindled to just a **handful of cases in recent years,** signalling a triumph of human resilience and concerted eradication efforts.

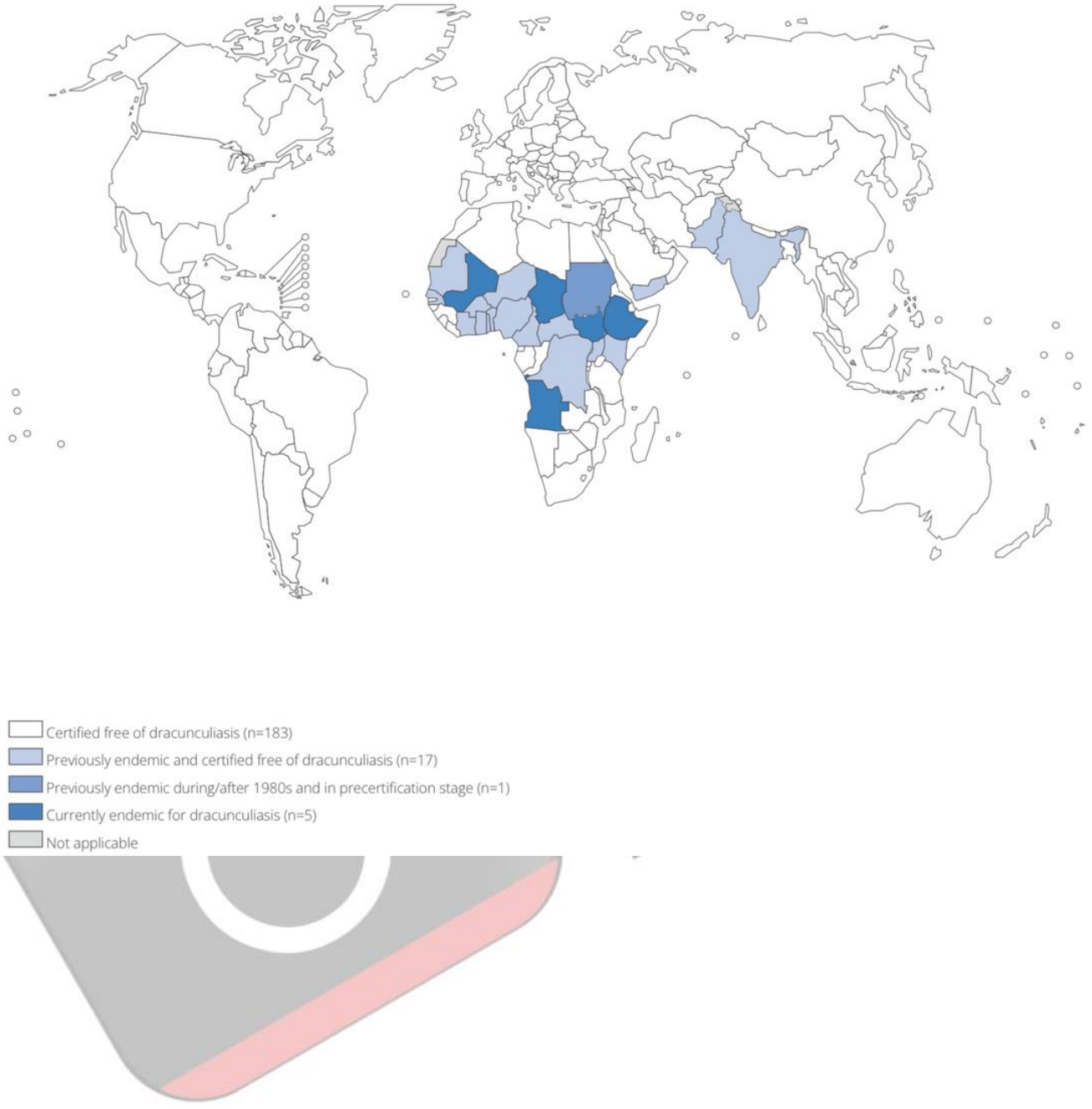


What are the Key Facts About Guinea Worm Disease?

- **About:**
  - Guinea worm disease, or Dracunculiasis is caused by the **Guinea worm *(Dracunculus***

***medinensis),* a parasitic nematode** is a debilitating parasitic disease that renders infected **individuals non-functional for weeks or months.**
    - It primarily affects **people in rural, deprived, and isolated communities** who rely on stagnant surface water sources for drinking.
    - In the mid-1980s, an estimated 3.5 million cases of dracunculiasis occurred in 20 countries worldwide, mainly in Africa and Asia.
- **Transmission, Symptoms and Impact:**
    - The parasite is transmitted when people drink **stagnant water contaminated with parasite-infected water fleas.**
    - The disease manifests with **painful skin lesions** as the worm emerges, causing **weeks of intense pain, swelling, and secondary infections.**
    - More than **90% of infections occur in the legs and feet,** affecting individuals' **mobility and ability to work** or perform daily tasks.
- **Prevention:**
    - There is **no vaccine or medication** to treat Guinea worm disease, but **prevention strategies have been successful.**
        - Strategies include heightened surveillance, preventing transmission from each worm through treatment and wound care, filtering water before drinking, larvicide use, and health education.
- **Road to Eradication:**
    - Efforts to eradicate Guinea worm disease began in the 1980s, with significant contributions from organisations like **WHO**.
        - Countries are **certified as free of dracunculiasis transmission** after reporting **zero instances for at least three consecutive years.**
    - Since 1995, WHO has certified 199 countries, territories, and areas as free of dracunculiasis transmission.
- **India's Success Story:**
    - **India achieved Guinea worm disease elimination in the late 1990s** through rigorous public health measures, including water safety interventions and community education.
        - The government of **India received Guinea worm disease-free certification status** from the WHO in 2000.
        - India has eradicated **Smallpox** (1980), **Polio** (2014), **Plague**, **Rinderpest (the Cattle Plague)**, **Yaws** and **Maternal And Neonatal Tetanus (2015).**
- **Ongoing Surveillance and Challenges:**
    - Active surveillance is essential to ensure no cases are missed and to prevent the disease's re-emergence.
    - Challenges persist in regions like **Chad and the Central African Republic, where civil unrest and poverty** hamper eradication efforts.
    - Challenges include finding and containing the last remaining cases, particularly in remote areas, and addressing infections in animals, notably dogs.

Status of certification of dracunculiasis eradication as of 1 January 2023



UPSC Civil Services Examination, Previous Year Questions (PYQs)

Prelims:

Q.1 Consider the following diseases: (2014)

1. Diphtheria
2. Chickenpox

3. Smallpox

Which of the above diseases has/have been eradicated in India?

(a) 1 and 2 only

(b) 3 only

(c) 1, 2 and 3

(d) None

Ans: (b)

Exp:

- **Smallpox is the only disease among the given diseases that has been eradicated from India.**
  - Smallpox was an infectious disease caused by the Variola virus. Early symptoms include high fever and fatigue. The virus then produces a characteristic rash, particularly on the face, arms and legs. The resulting spots become filled with clear fluid and later, pus, and then form a crust, which eventually dries up and falls off. The last naturally occurring case of smallpox was diagnosed in 1977.
- Diphtheria is an infectious disease caused by the bacterium Corynebacterium diphtheria, which primarily infects the throat and upper airways, and produces a toxin affecting other organs. It is preventable by vaccines. Diphtheria cases are still very common in India.
- Varicella, also commonly referred to as chickenpox, is an acute and highly contagious disease. It is caused by primary infection with the Varicella-zoster virus. Its cases are still found in India. **Hence, 2 is correct.**
  - **Therefore, option (b) is the correct answer.**

Mains

Q. Critically examine the role of WHO in providing global health security during the Covid-19 pandemic. **(2020)**