

# Eradicating guinea worm disease

Going for the last mile ...

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World Health Organization  
Control of Neglected Tropical Diseases

GLOBAL HEALTH HISTORIES SEMINARS  
Eradicating guinea worm disease

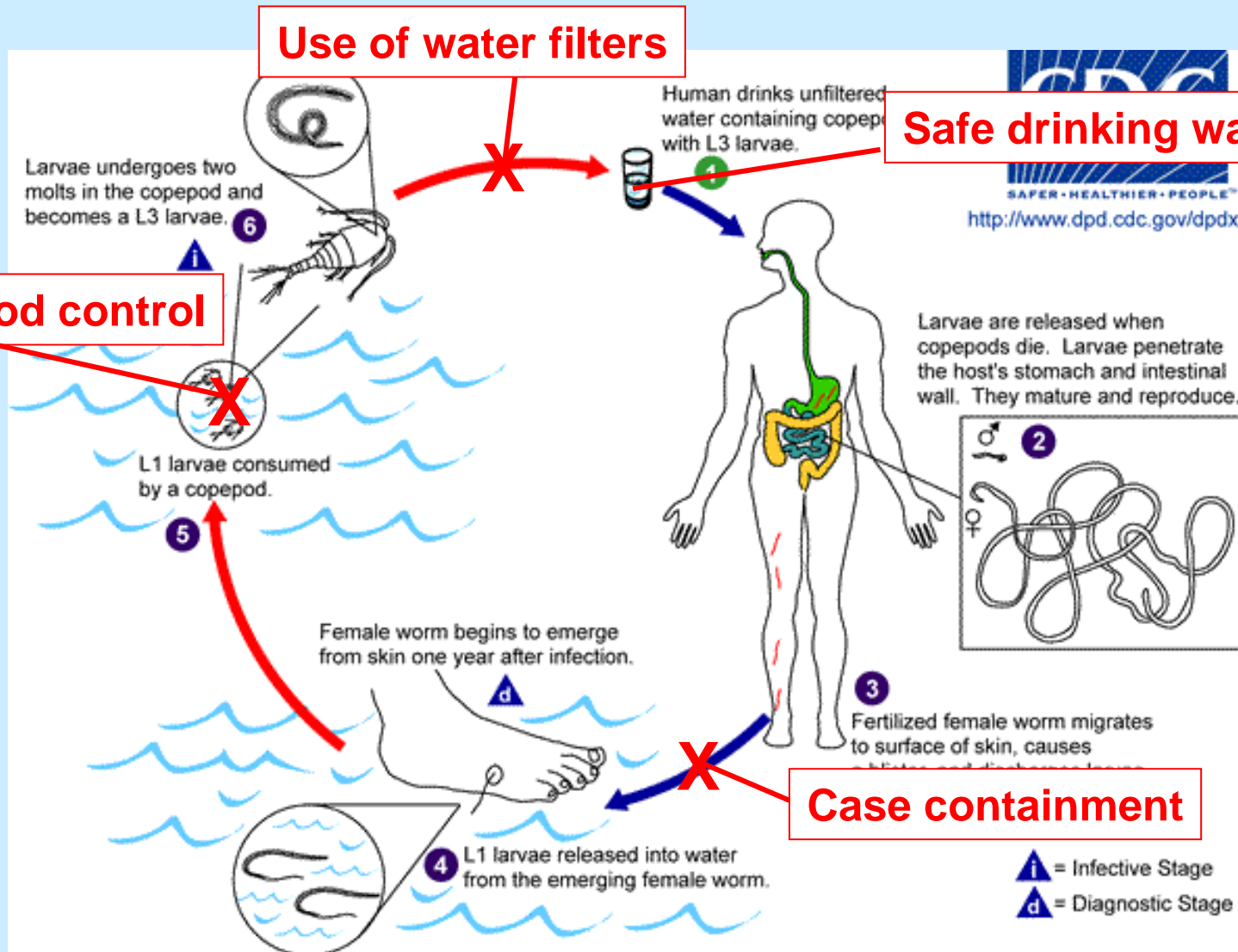
# *Dracunculus medinensis*

## A perfect candidate for eradication

- **High** perceived **burden of disease** (guarantee for popular support)
- **Easy** & unambiguous (clinical) **diagnosis**
- **Human** is the **only final host** (no animal reservoir)
- Disease has a **limited** geographical **distribution** and is seasonal
- **Feasibility of** successful interruption of transmission demonstrated in several settings - **interventions** are relatively simple, effective, and inexpensive
- **Synergy** of attack **with other interventions** (Safe Water Supply)



# Life cycle (duration ~1 year) and preventive measures



# The set of interventions

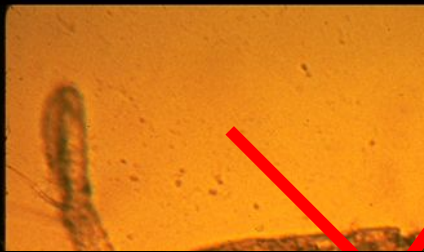
- Community-based surveillance to detect cases early
- Intensive case containment measures
- Safe water
  - Provision of safe water
  - Provision of filtering devices
  - Selective chemical treatment of water sources
- Health education for high compliance/implementation rates



# Case containment:



# Copepod control



# Safe water supply



# Provision (and correct use) of filtering devices



# Guinea Worm Eradication

## Who are the main actors and what did it cost ?

**Affected countries,** with as main international partners

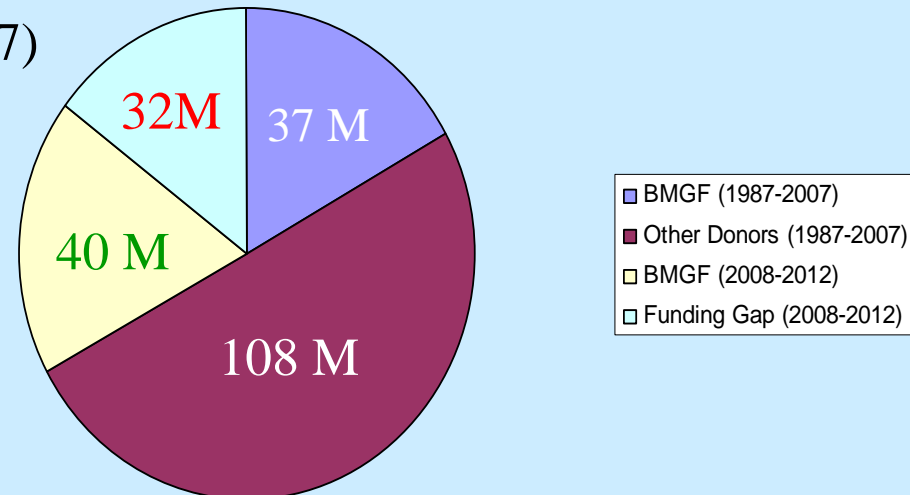


External contributions for GWE (1987-2007)

145 M US\$

Estimated funding needs (2008-2012)

72 M US\$

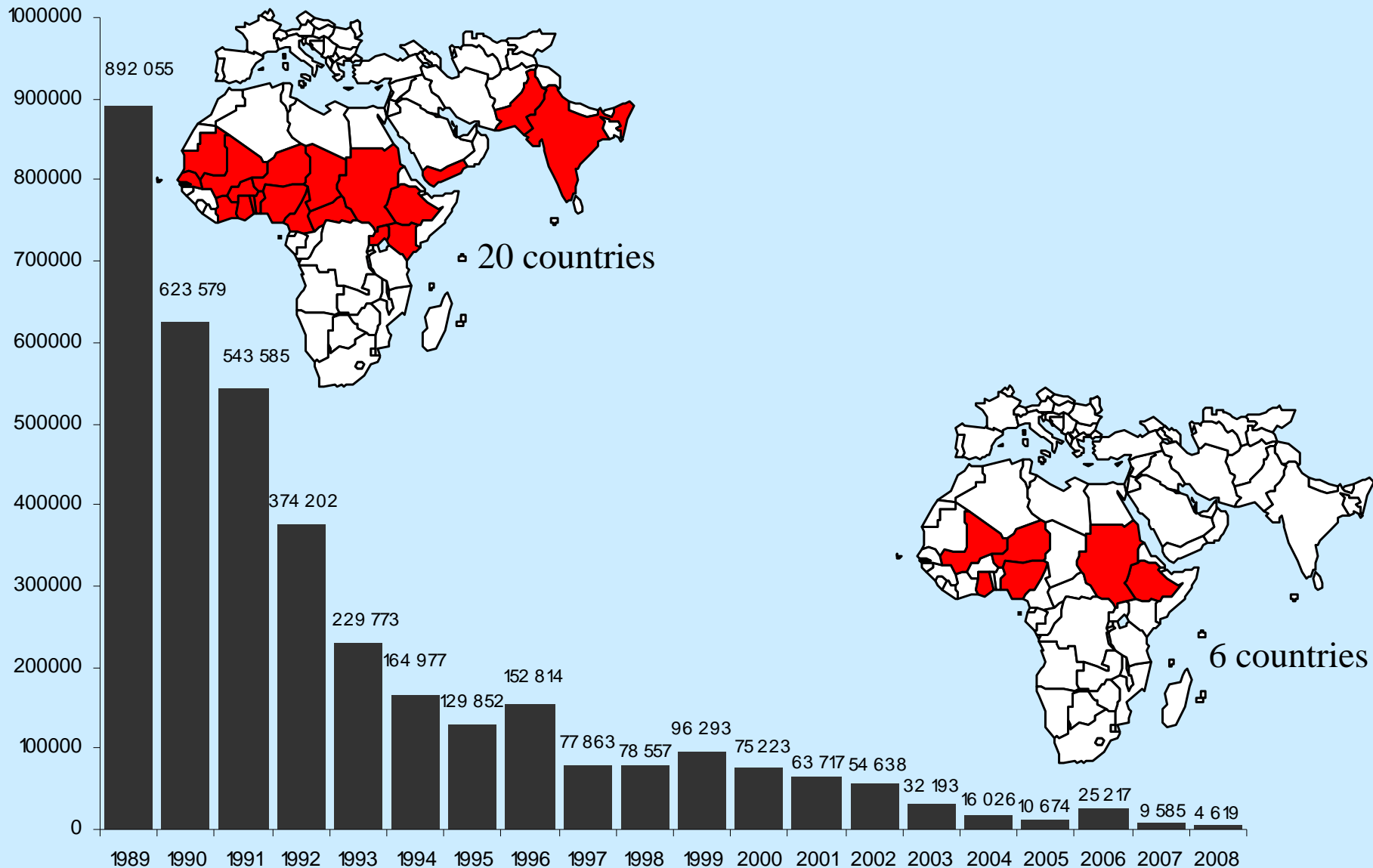


# WHA Resolutions - deadlines

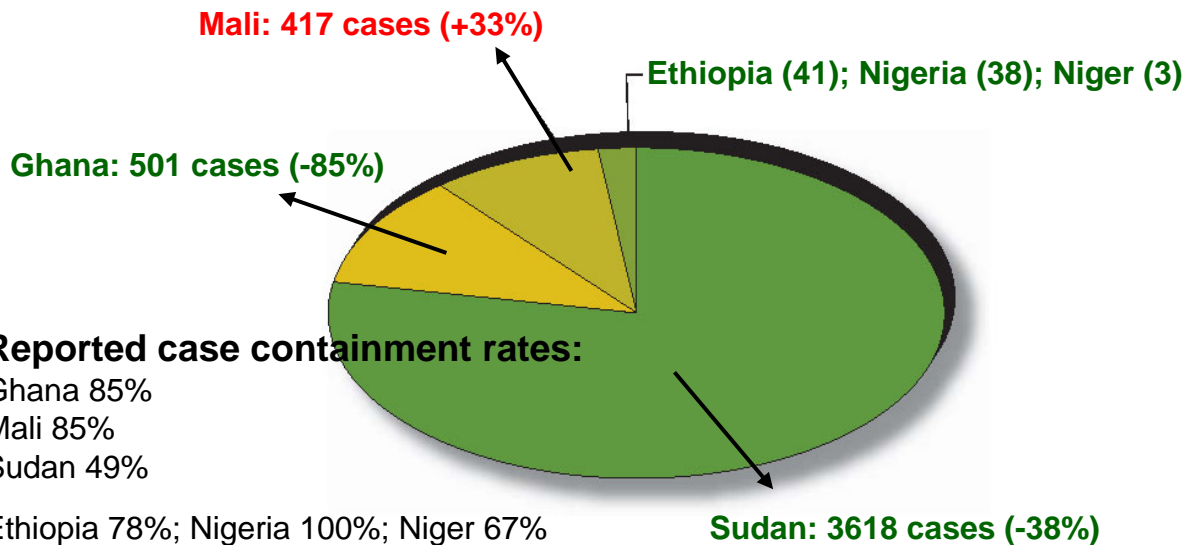
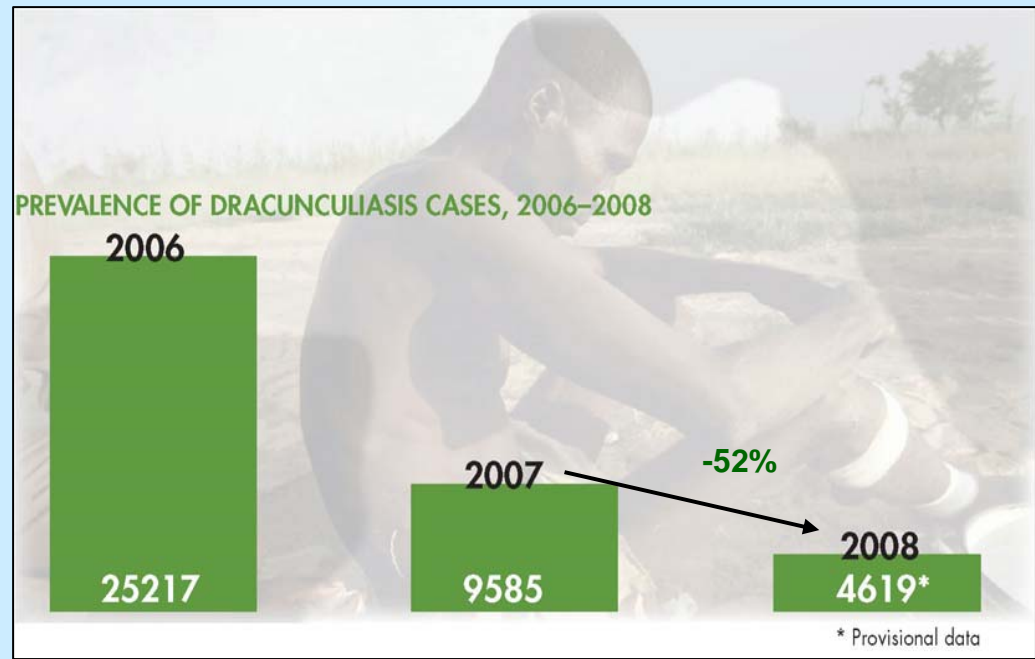
- WHA34.25 of 22 May **1981** for International Drinking Water Supply and Sanitation Decade (stressing that the Decade present an opportunity to eliminate Guinea-worm disease)
- WHA39.21 of 16 May **1986** initiating Guinea-worm elimination
- WHA42.29, of 19 May **1989** declaring the goal of eliminating the disease as a public health problem from the world in the 1990s
- WHA44.5 of 13 May **1991** Declaring the goal of eradication of guinea-worm by 1995
- WHA50.35 of 14 May **1997** calling for extra efforts to eradicate the disease
- WHA57.9 of 22 May **2004** Declaring the goal of eradication of guinea-worm by 2009 (Geneva Declaration).



# Global number of dracunculiasis cases, 1989-2008



# Further progress in 2008



## ... and in 2009

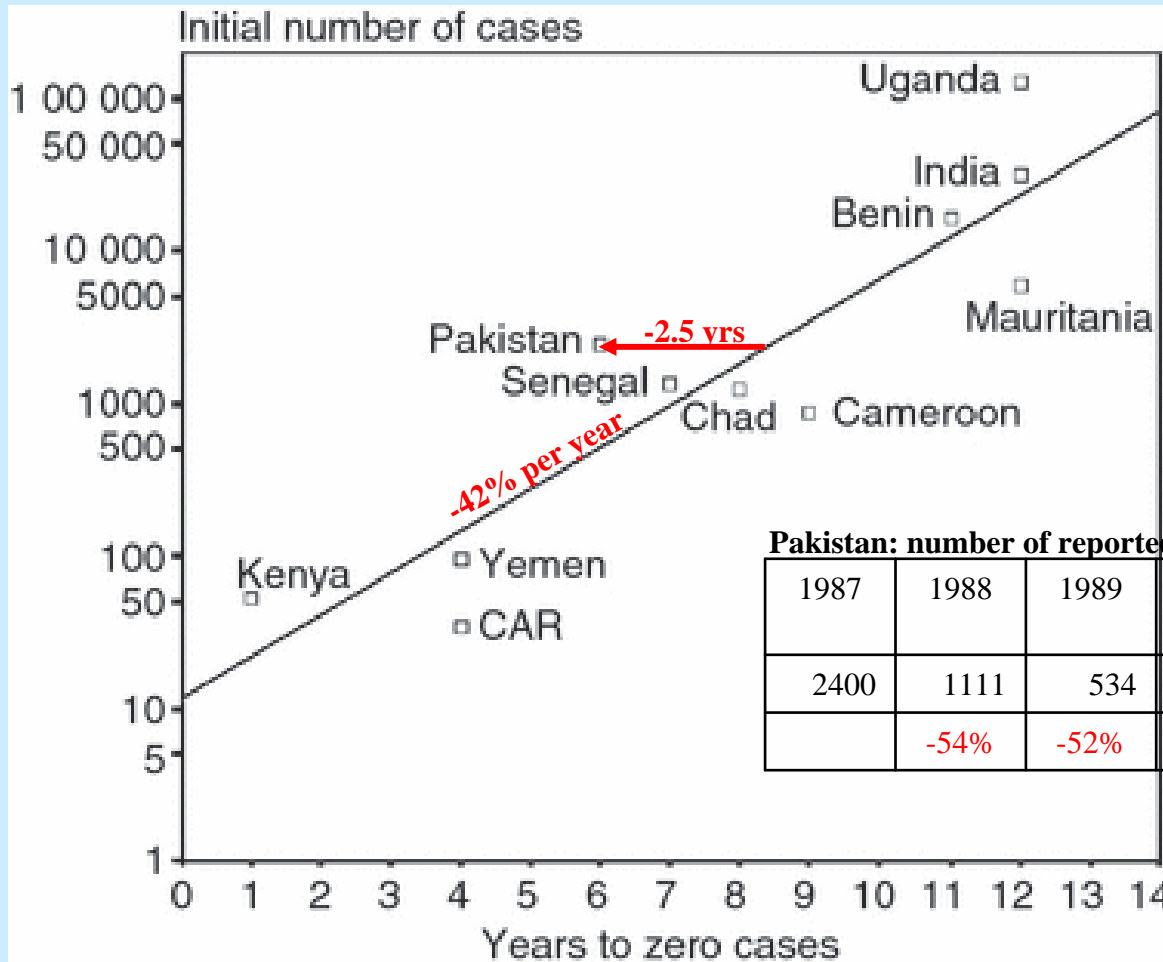
Jan-Feb 2008: 257 cases

Jan-Feb 2009: 122 cases (-52%)



# How long will it still take to eradicate dracunculiasis ?

Number of dracunculiasis cases at the start of full scale GWE effort and time taken to achieve 0 cases



Ghana: -85% (2007-2008)  
Sudan: -38% (2007-2008)

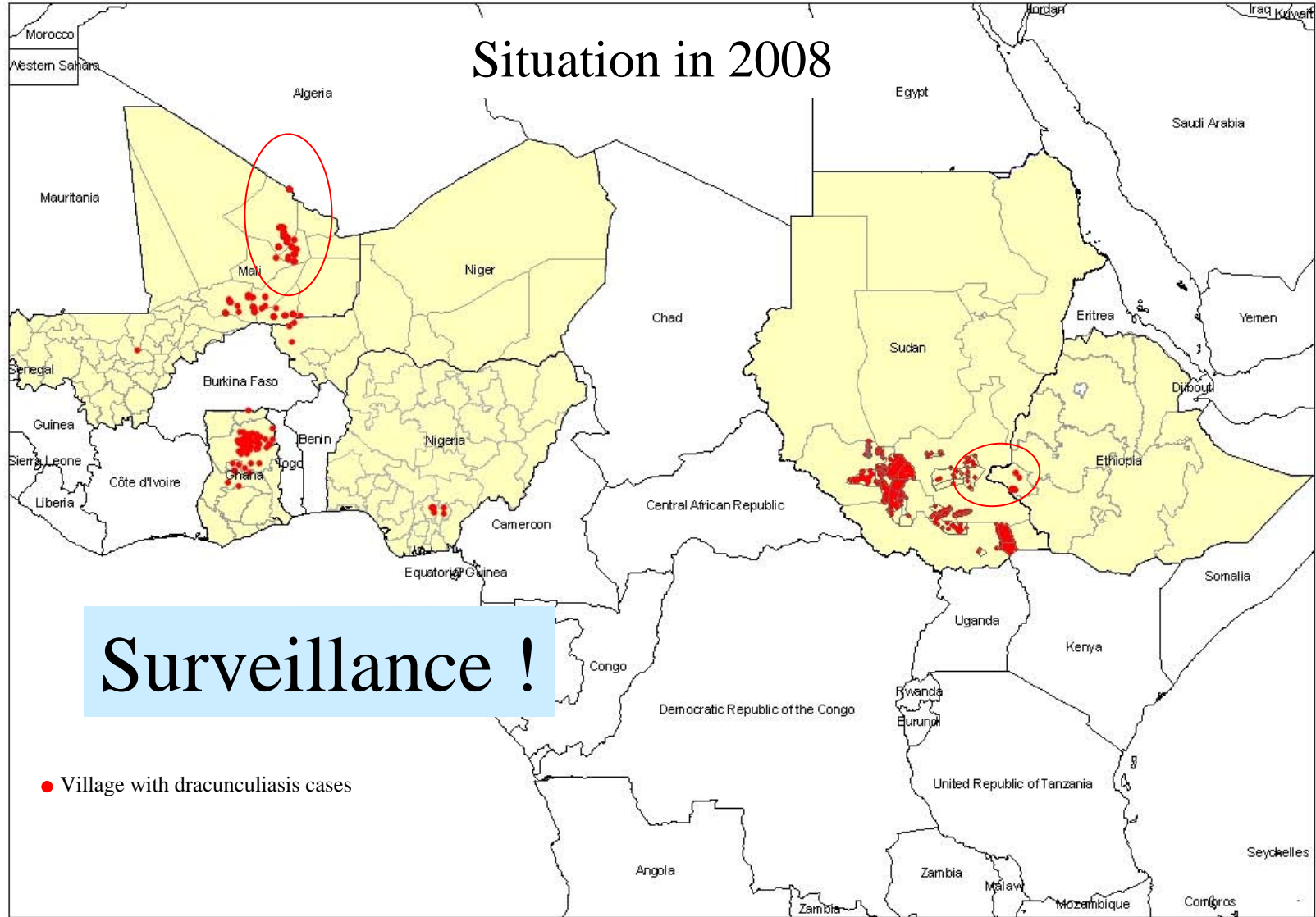
Pakistan: number of reported cases

1987	1988	1989	1990	1991	1992	1993	1994
2400	1111	534	160	106	23	2	0
	-54%	-52%	-70%	-34%	-78%	-91%	-100%

Tayeh & Cairncross (2007). Dracunculiasis eradication by 2009: will endemic countries meet the target ? *TMIH* 12: 1403-1408



# Remaining challenges or threats



# Remaining challenges or threats

War = *Dracunculus*' best friend



# WHO's specific responsibility: Guiding countries towards Certification of Eradication

- **Surveillance in Guinea worm-free areas**
  - Endemic countries to develop and maintain surveillance, reporting, and response capacity in Guinea worm-free areas
- **Pre-certification (for 3+ years after the last case)**
  - Setting up of a National Certification Committee (NCC)
  - Continue and extend surveillance
  - Rumors registration and investigation
  - Reward system
  - Ad hoc case searches
- **Certification of countries as Guinea worm-free**
  - Final phase of the eradication process.
  - Starts with verification of capacity of surveillance early during pre-certification phase
  - Three-year assistance of National Certification Committee
  - Certification country by country, by ICCDE/DG, after a visit by International Certification Team.
  - Global eradication is achieved when all countries are certified free of transmission.



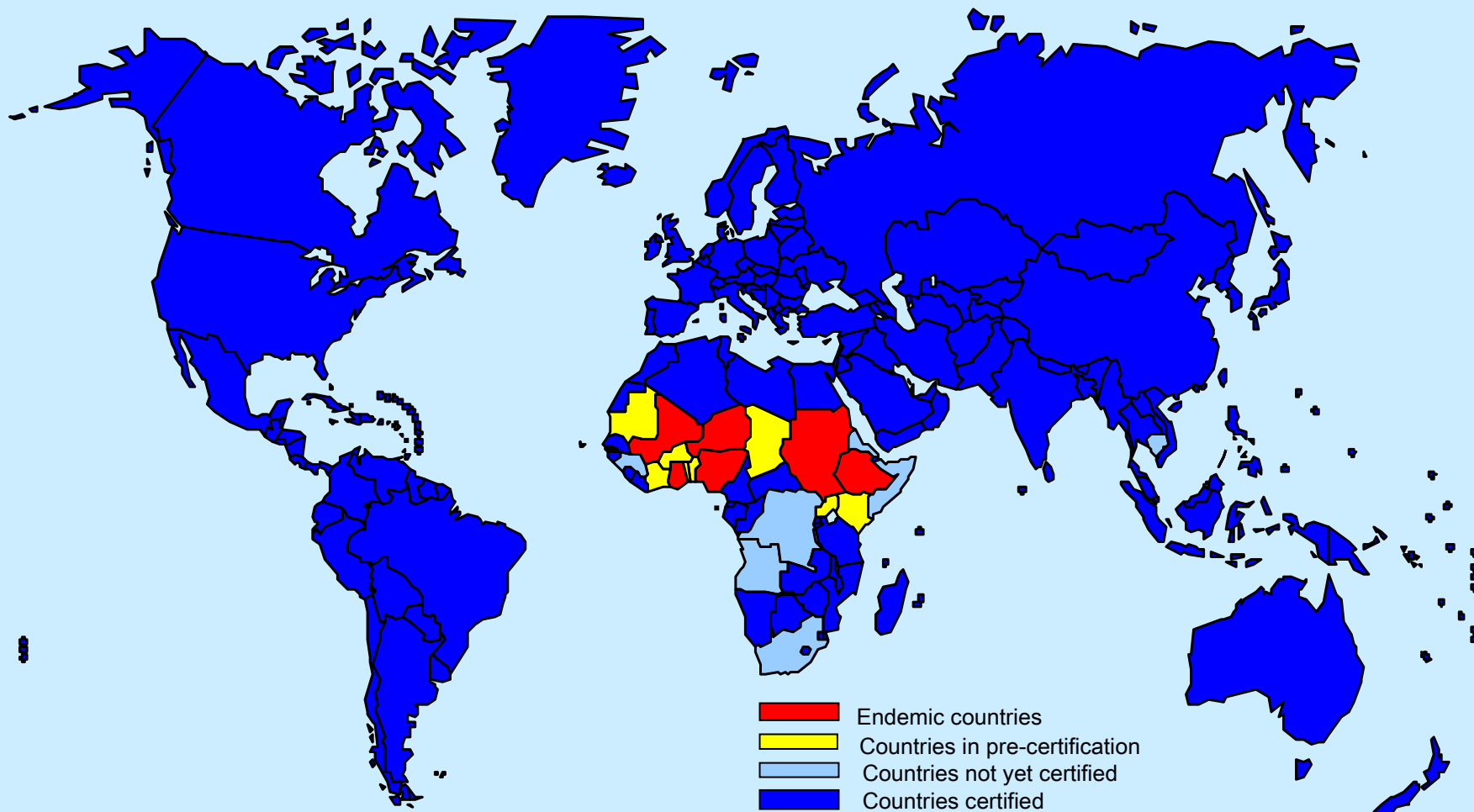
# Pre-certification – certification

## Current situation

- 180 countries certified, including six formerly endemic countries: India, Pakistan, Senegal, Yemen, CAR, and Cameroon
- 8 countries currently in the pre-certification stage: **Benin, Burkina Faso, Chad, Côte d'Ivoire, Kenya, Mauritania, Togo and Uganda**
- 6 countries have not yet interrupted transmission: **Ghana, Ethiopia, Mali, Niger, Nigeria and Sudan**
- 8 other non-endemic countries will also need to be certified by WHO in order to achieve global eradication: **Angola, Brunei, Cambodia, Democratic Republic of Congo, Eritrea, Guinea, Somalia, and South Africa**



# Status of Certification of Dracunculiasis Eradication



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More information available at:  
[www.who.int/dracunculiasis](http://www.who.int/dracunculiasis)

