

# Border Malaria: defining the problem to address the challenge of malaria elimination



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Organization**



- Border malaria or cross-border malaria is often cited as a challenge for malaria elimination
- Many countries find their last few foci near the international land borders (*Li et al. Malaria Journal, 2023*)
  - E-2020 countries: 73.7% (14/19)
  - E-2025 countries: 86.4% (19/22)
  - Certified countries: 72.7% (16/22)
- Countries that have land borders eliminated malaria more slowly than island countries (*Cohen et al. Malaria Journal, 2022*)



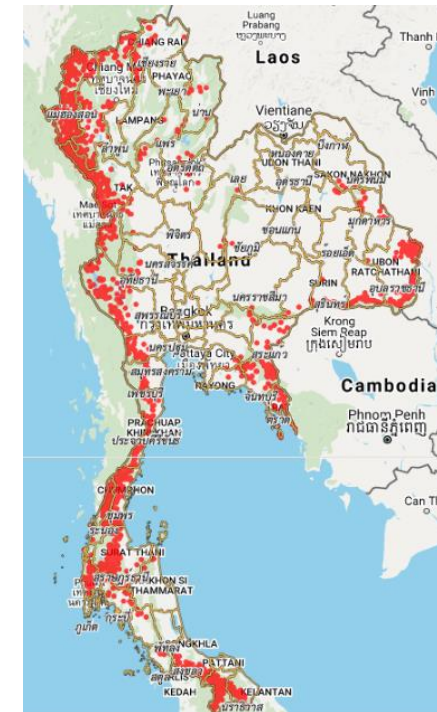
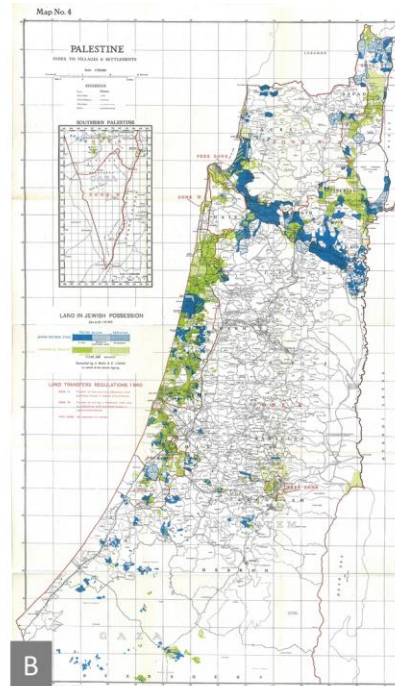
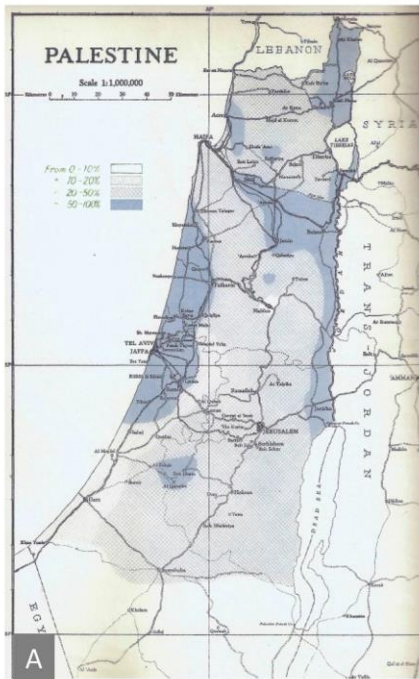
- Border malaria is defined as malaria transmission, or the potential for transmission, across or along shared land borders between countries where at least one of them has ongoing malaria transmission.
  - Avoid providing a precise distance
  - Delimits the geographical scope of border malaria to areas in the **vicinity** of international **land** borders
  - The definition excludes malaria importation to interior areas far away from the international land border, through sea borders or airports or into island countries.

# Why does “border” often represent the last mile of malaria elimination?



Receptivity (intrinsic transmission potential) in border areas

Border as a footprint of the interplay between malaria, man and his environment

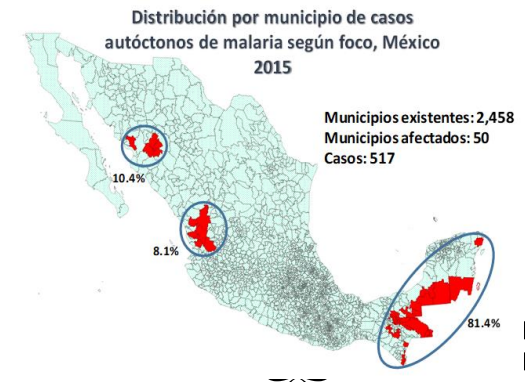
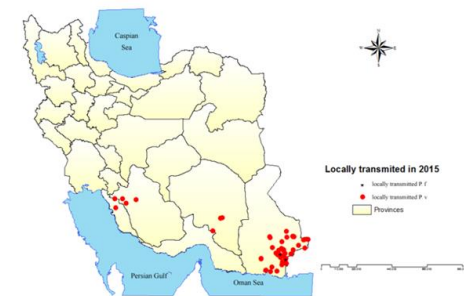
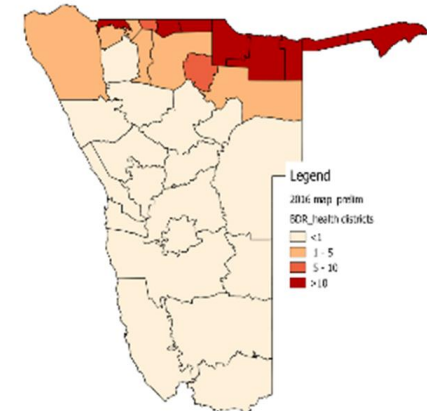


The border of Israel was defined by malaria? !

# Why does “border” often represent the last mile of malaria elimination?



- Social and economic development, and political unrest
- Border areas are often the poorer areas (if not the poorest)
  - Neglected for development
  - Remoteness
  - Conflict, political unrest, security
- Impact on malaria elimination
  - Health system
  - Challenges in implementation
  - Slow decline in the **entomological receptivity**





# Why does “border” often represent the last mile of malaria elimination?



## Cross-border movement and challenges in implementing malaria programmes

- Characteristics: short-term, frequent, and cyclical cross-border movement
- A shared focus or a shared transmission zone: share a common ecology, with frequent mixing of people, parasites, and vectors.
- Challenges of international coordination:
  - The sovereignty of two political entities
  - Each has its own health systems, health priorities and development agendas.





- Availability and utilization of vector control by targeted populations (e.g. migrants, indigenous population)
- Challenges of international coordination
  - A shared focus and a shared transmission zone
  - Synchronize vector control
- Other challenges
  - Political unrest, security
  - Weak health system and low capacity in periphery areas
- Current vector control tools are not so effective in controlling vectors dwelling in forest areas (e.g. borders)



- Each border is unique
  - Situation analysis: define the geographical boundaries of transmission
- Define the problems of implementation of vector control in border areas
  - Who are at risk? What are the barriers?
  - Quality-assured vector control
  - Do the two sides of the border constitute a shared focus or a shared transmission zone?
- Innovations in vector control tools, as well as social and economic development, are needed to shorten the long tail and accelerate elimination





Li et al. *Malaria Journal* (2023) 22:239  
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**COMMENT**

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## Border malaria: defining the problem to address the challenge of malaria elimination



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