

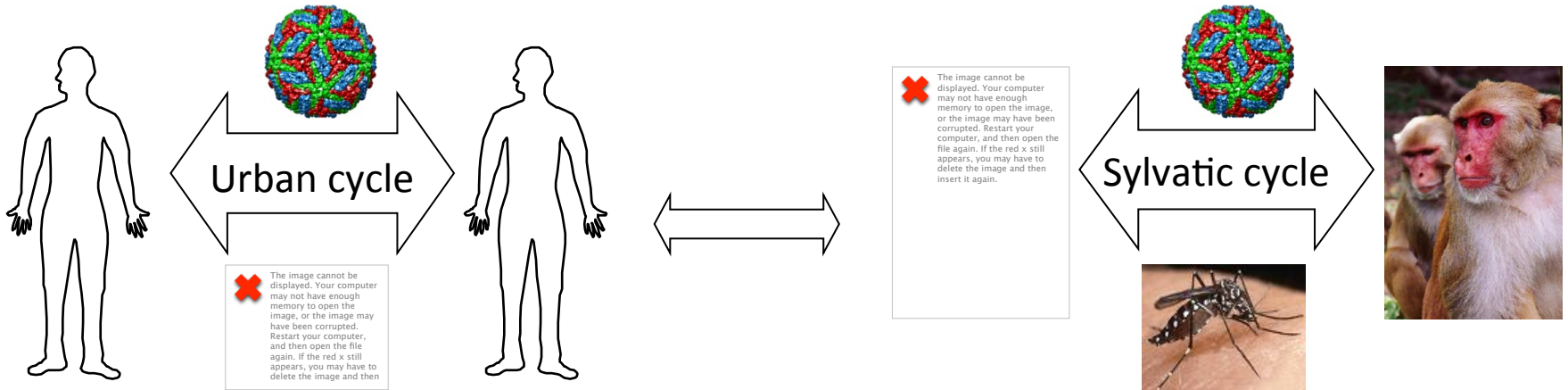
Dengue

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Dengue

- Acute systemic vector-borne viral infection
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~~Arthropod-transmitted viruses, four types (DENV-1-4)~~
 - No animal models of disease, no licensed vaccines or anti-viral



Symptomatic and hospitalised

Symptomatic

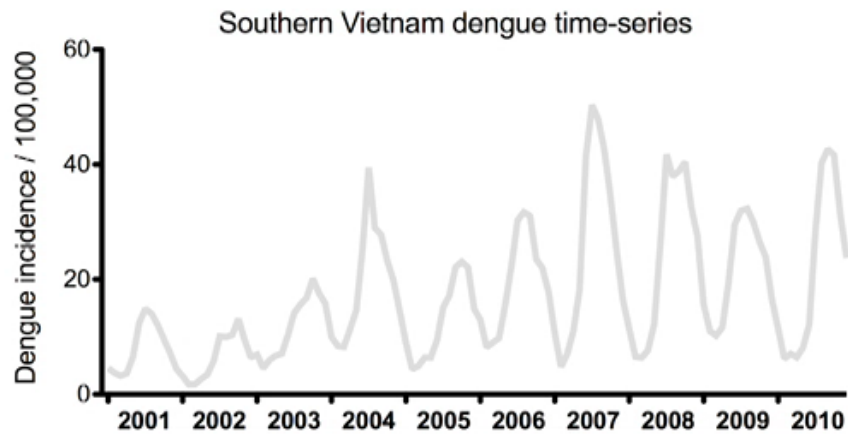
Asymptomatic



- Commonest complication is increased systemic vascular permeability- can lead to dengue shock syndrome

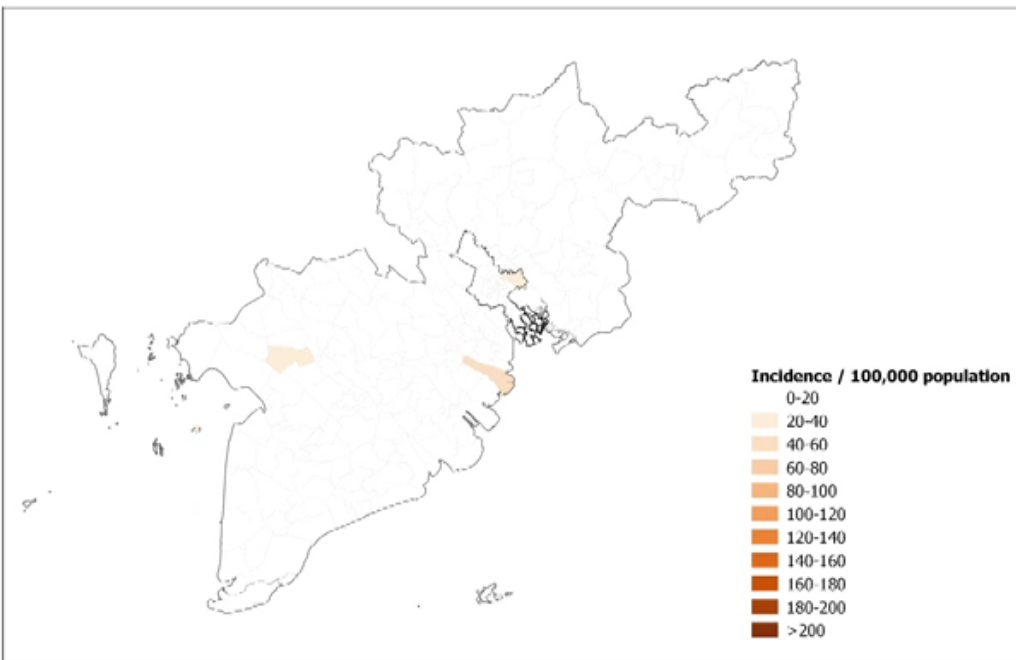
A variety of haemorrhagic manifestation

- due to the combined effects of:-
 - Deranged haemostasis



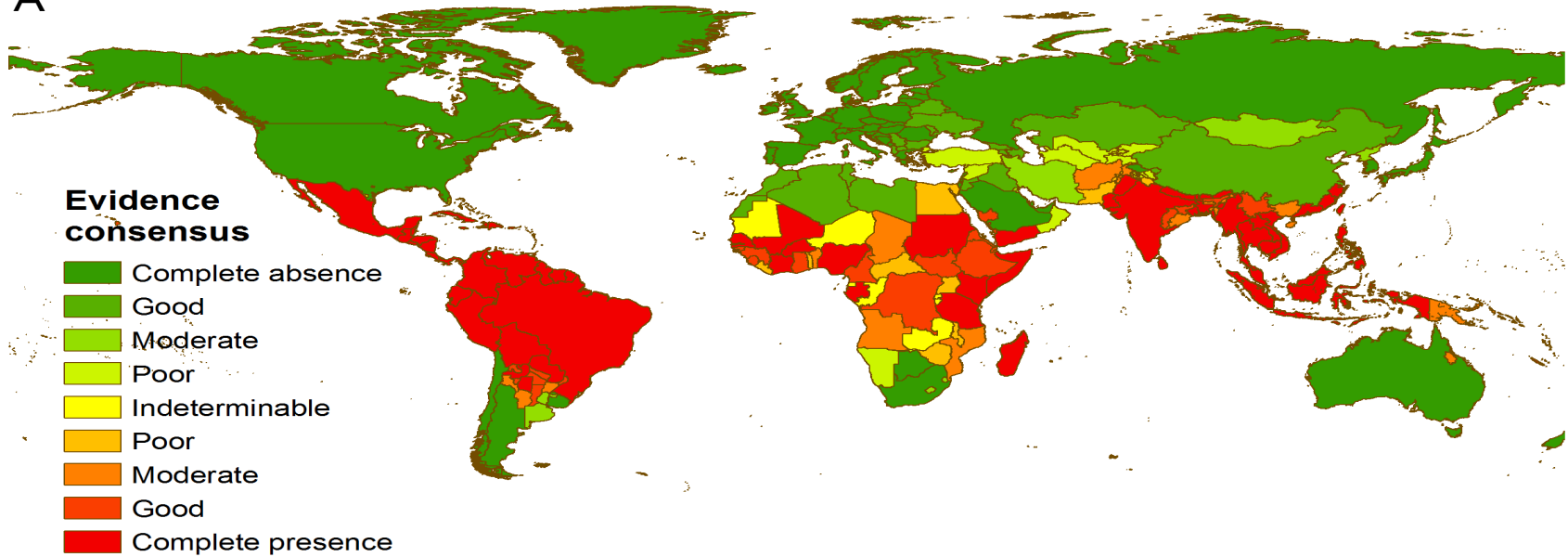
The epidemiological and clinical problem

- Unpredictability - temporal and spatial heterogeneity in transmission patterns
- High case burden (seasonal)
- Large numbers hospitalised for observation
- Stretched health care systems

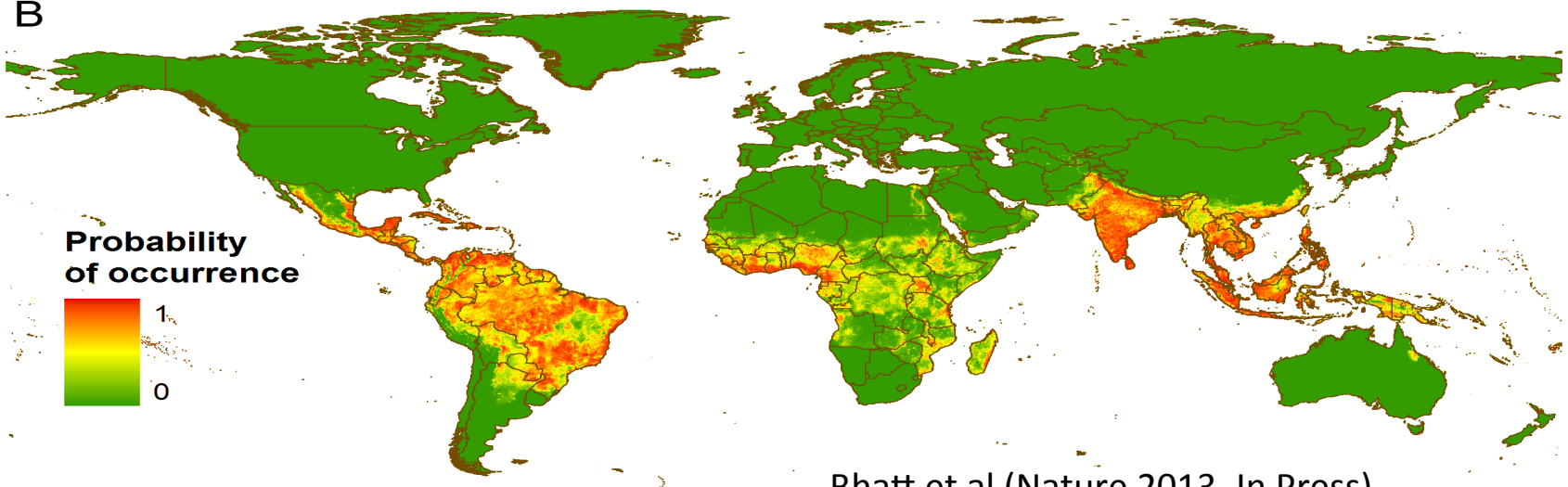


Global evidence consensus, burden of dengue in 2010.

A

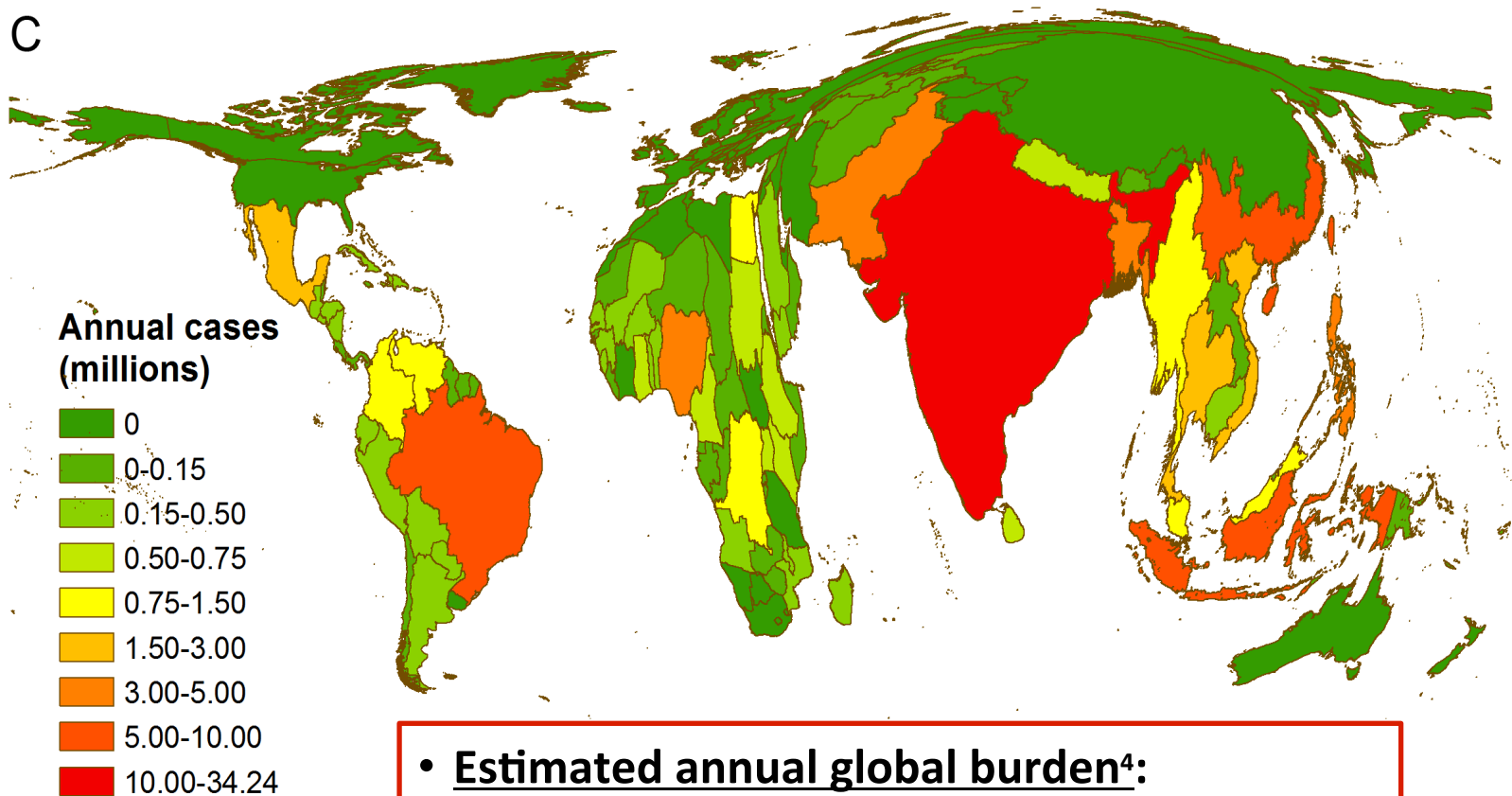


B



Global evidence consensus, burden of dengue in 2010.

C



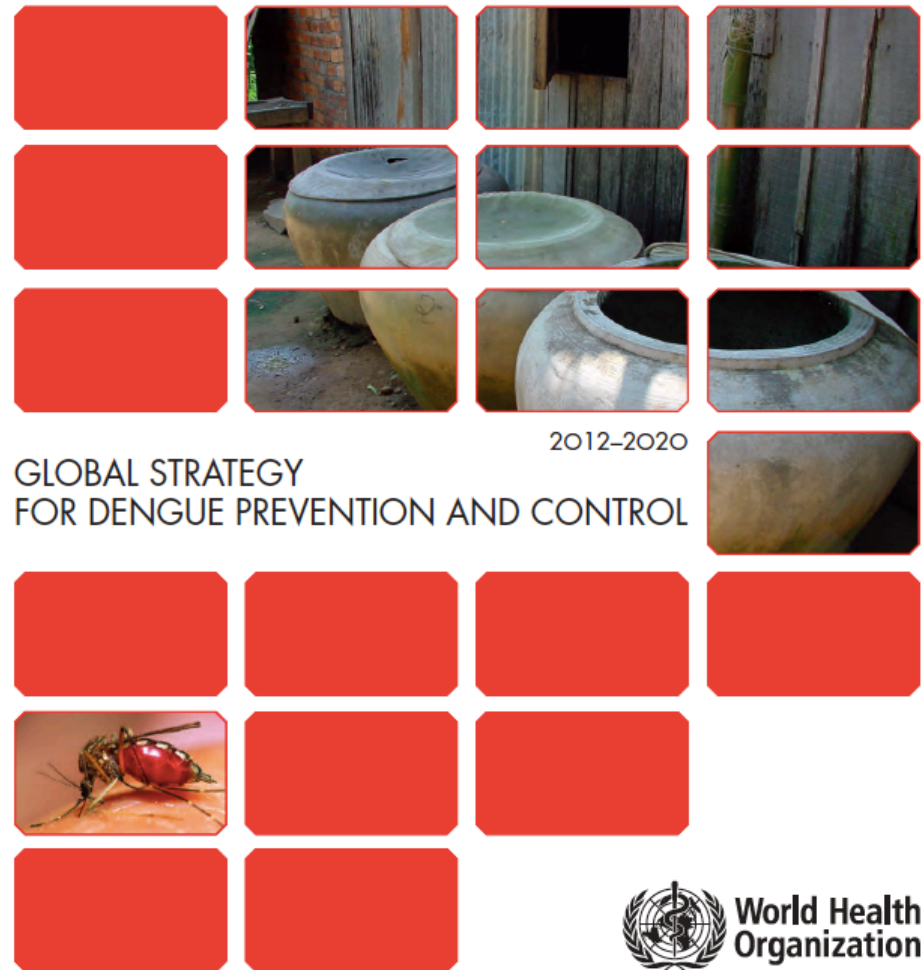
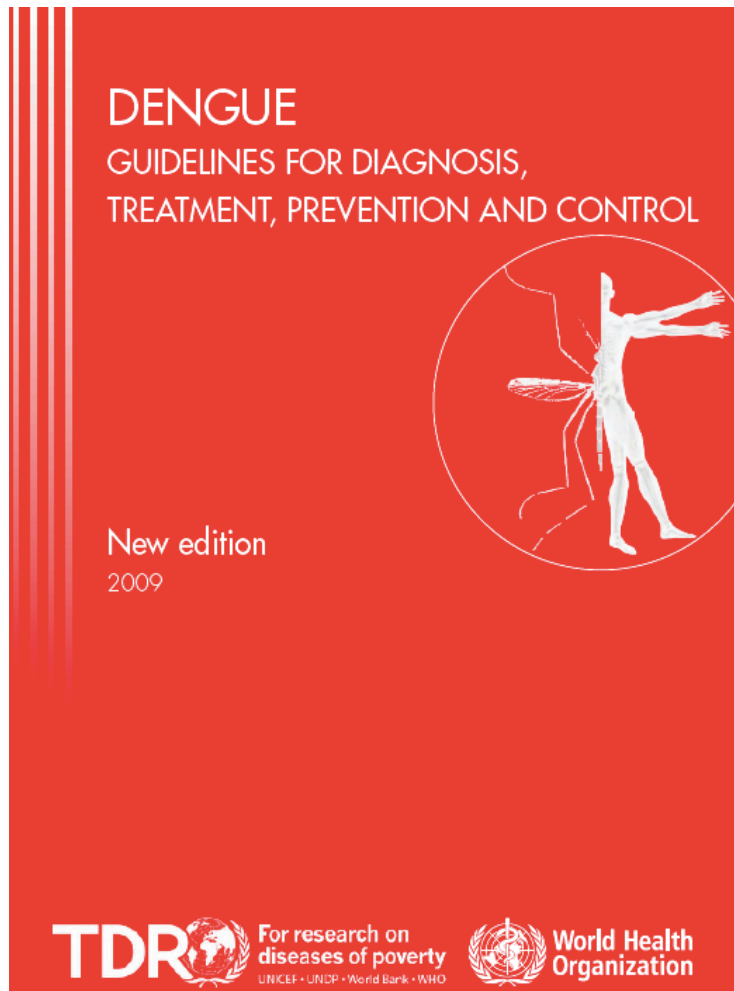
- **Estimated annual global burden⁴:**

- 100 million symptomatic cases
- 2.1 million severe dengue cases
- 21,000 deaths

Understanding the global disease burden- what are the gaps?

- Clinical surveillance systems exist in SE Asia and Latin America
 - mainly middle income countries
 - seldom supported by laboratory diagnostics
- Burden of dengue in Africa and South Asia very poorly understood
- Better harmonisation of surveillance methods and reporting is needed

WHO plays a leadership role in policy



Goal: to reduce the burden of dengue

1. To reduce dengue mortality by 50% by 2020
2. To reduce dengue morbidity by 20% by 2020
3. To estimate the burden of disease by 2015

Diagnosis & case management

Integrated Surveillance & outbreak preparedness

Sustainable Vector control

Future vaccine implementation

Operational research

Integration of a vaccine with other tools for prevention and control would be the most effective way to reduce the burden of dengue

Dengue Vaccine Initiative

Consortium of organizations working to lay the groundwork for dengue vaccine introduction

- **Objective 1:**
Develop sound evidence for decision-making regarding the introduction of dengue vaccines
- **Objective 2:**
Conduct policy and access-related activities to create an enabling environment for the introduction of dengue vaccines
- **Objective 3:**
Conduct introduction activities in first adopter countries of a licensed vaccine and to lay the ground work for the introduction of second generation vaccines

