

Malaria: Yesterday, Today, and Tomorrow

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Washington, DC**

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Malaria

MAL

ARIA

Bad

Air



Sir Ronald Ross



- British officer in the Indian Medical Service
- Poet, scientist, mathematician, novelist, painter and musician
- 1897, India: Ross discovered the role of mosquitoes in transmission of malaria in humans while dissecting the stomach tissue of an anopheline mosquito fed on a patient with malaria
- 1902: Awarded the second Nobel Prize for Medicine for his work on malaria

Malaria Eradication

The Call to Arms

- “We’re not done, and we will not stop working, until malaria is eradicated.”

--Bill Gates

- “To aspire to anything less is just far too timid a goal for the age we’re in.”

--Melinda Gates

October 17, 2007
Seattle

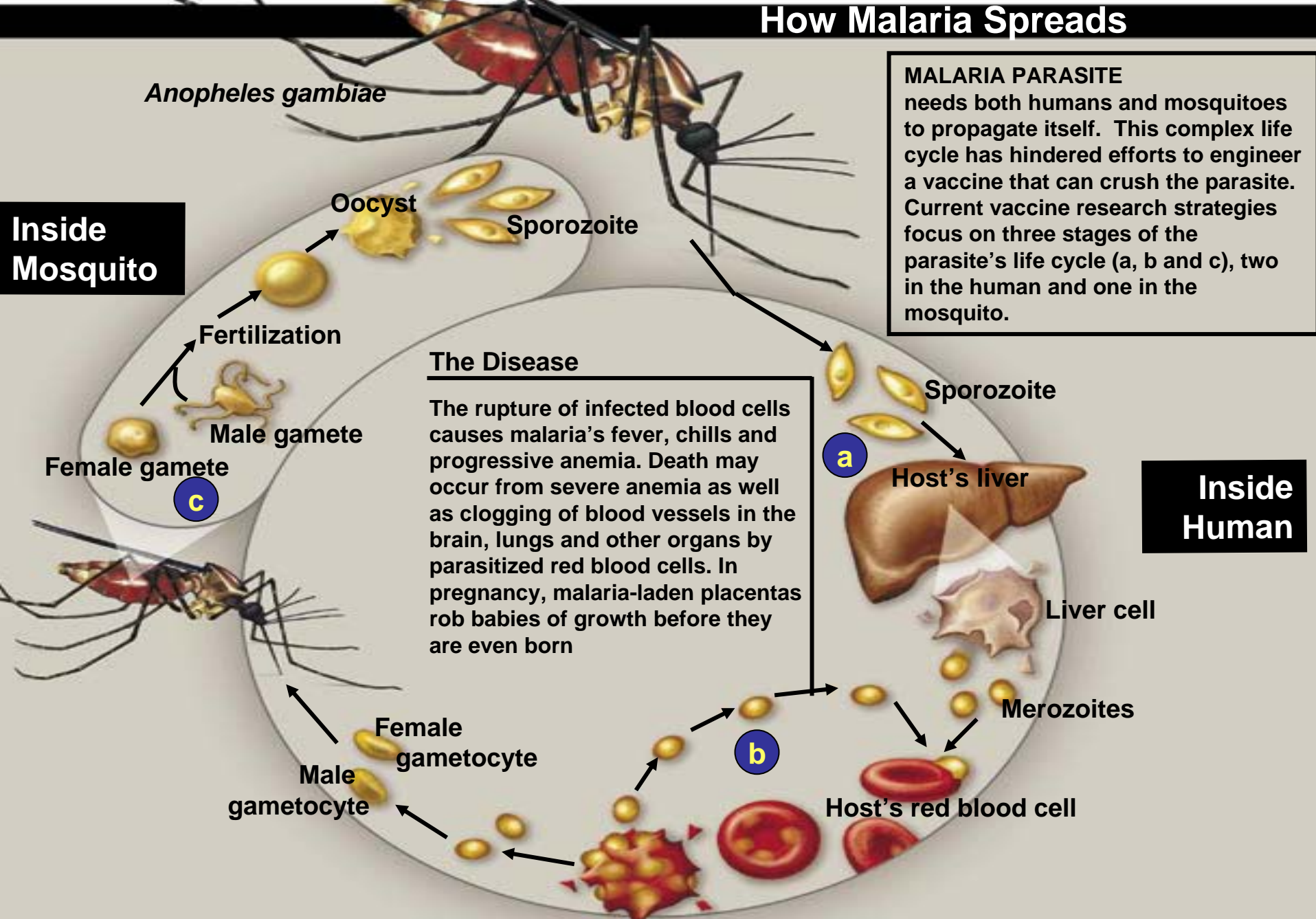


Definitions

- **Malaria Control:** reducing disease burden to a level where it is no longer a major public health problem
- **Elimination:** interrupting local mosquito-borne malaria transmission in a defined geographical area, i.e. zero incidence of locally acquired cases
- **Malaria-free area:** area where there is no ongoing local mosquito-borne malaria transmission, and the risk of acquiring malaria is limited to introduced cases only
- **Eradication:** permanent reduction to zero of the worldwide incidence of infection



How Malaria Spreads



Female *Anopheles freeborni* mosquito having a blood meal

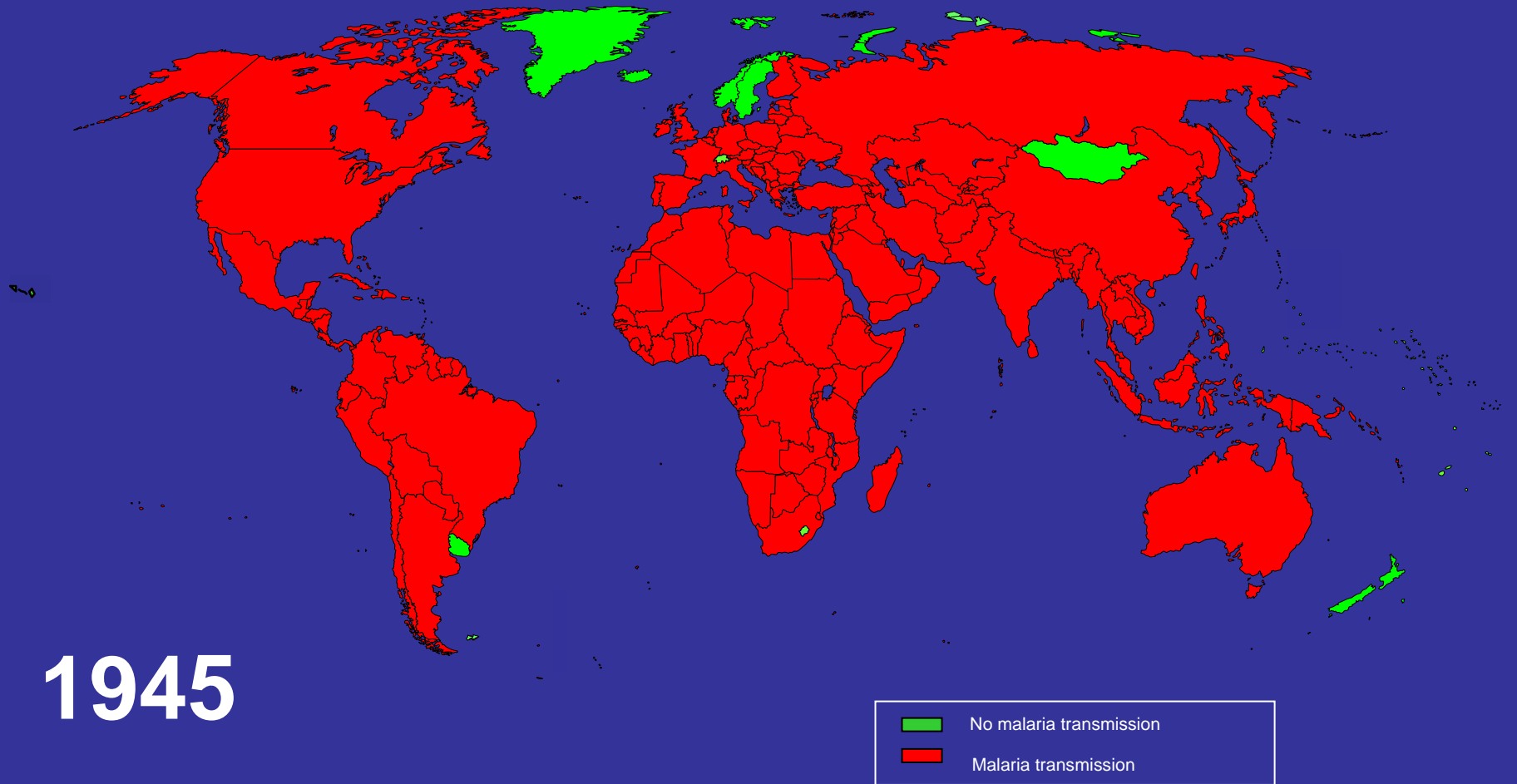


The Eradication Strategy

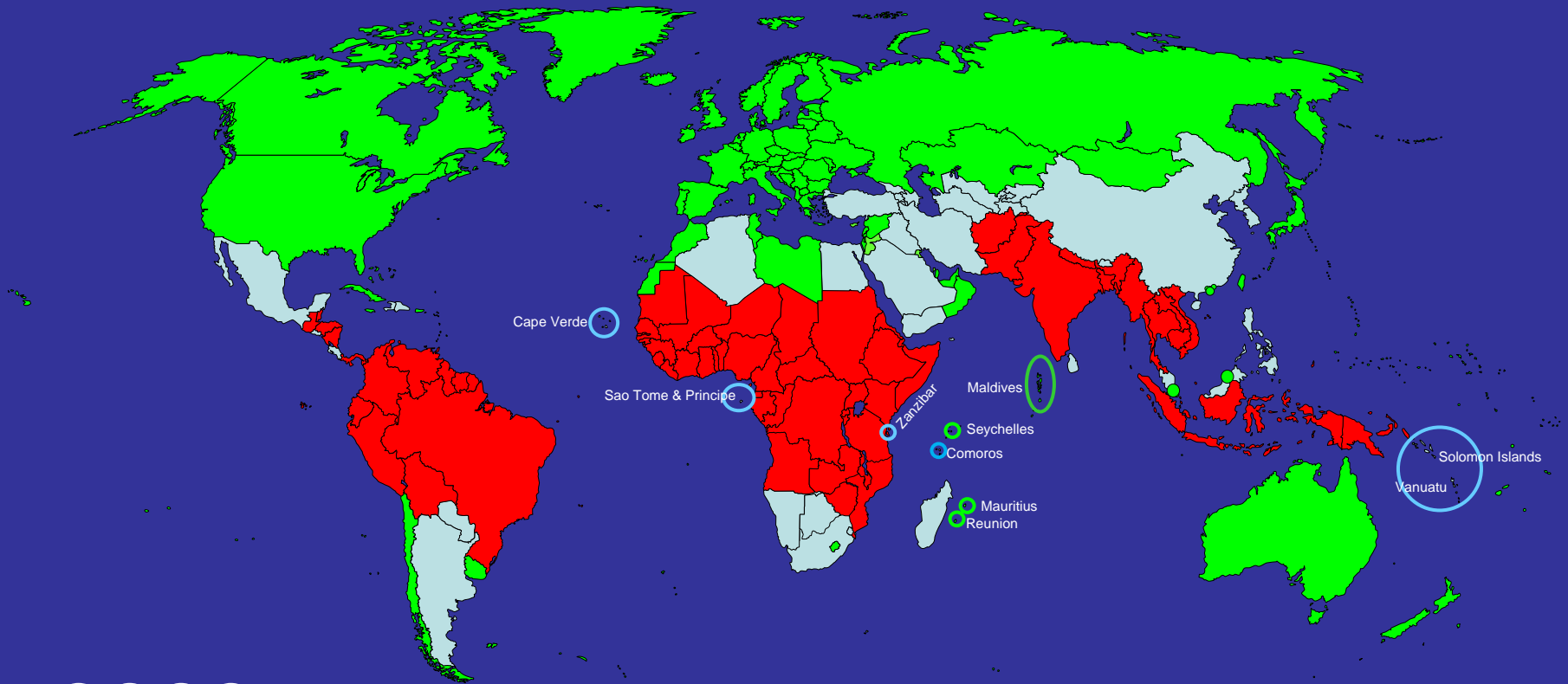
1. Aggressive control in the heartland, to achieve very low transmission and zero mortality where possible,
2. Progressive elimination from the endemic margins to shrink the malaria map, and
3. Research to bring forward a vaccine and better drugs, diagnostics, and other tools.



The Boundaries of Malaria Transmission By Country



Progress Towards Elimination by Country



2009



Sustained Control

- Suppress the Vector
 - Indoor residual spraying
 - Insecticide treated nets
 - (- Larviciding)
 - (- Drainage)
- Kill the Parasite
 - Rapid diagnostic tests
 - Prompt and effective treatment
- Presumptive Treatment



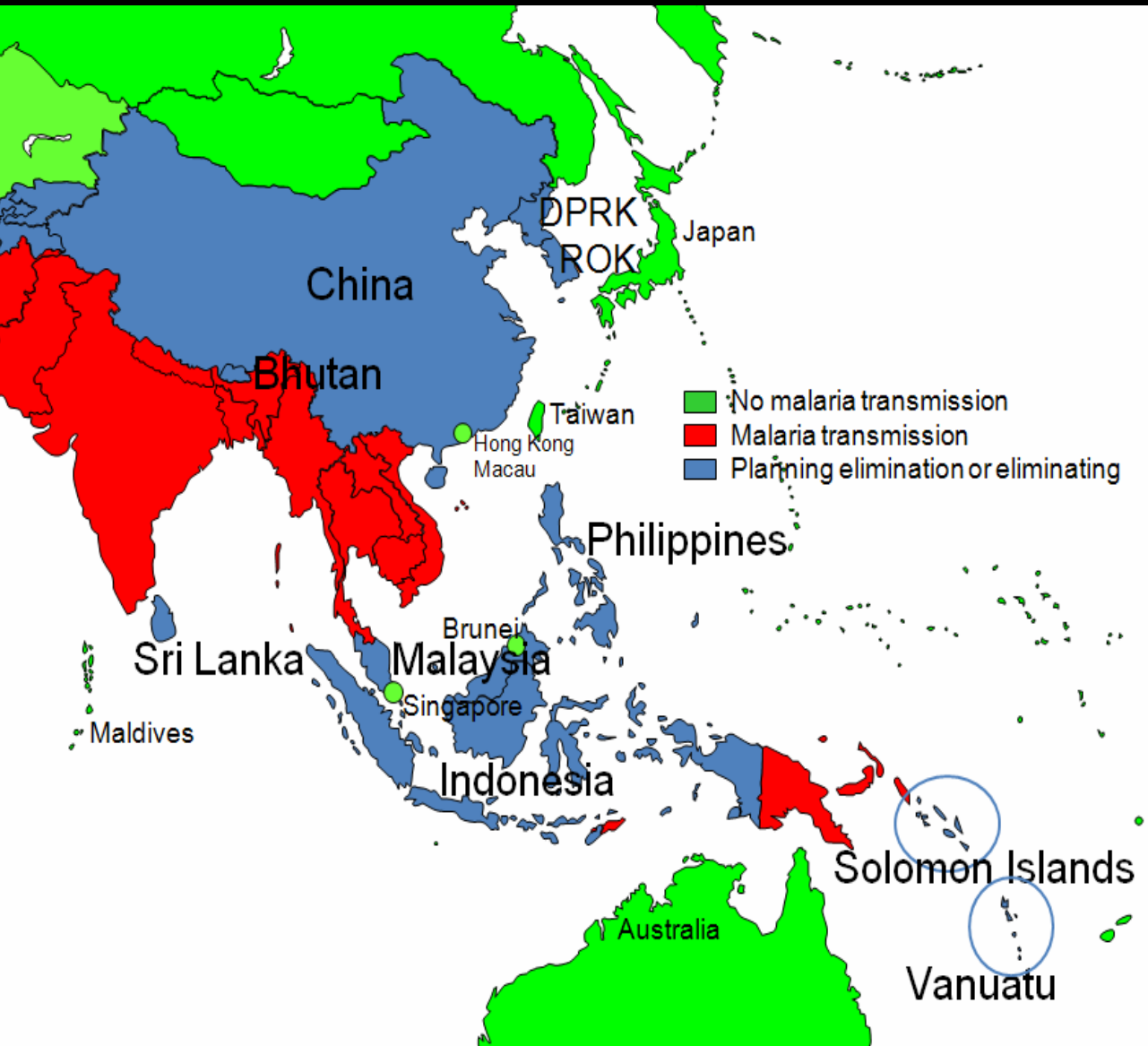
Elimination

Add:

- Active surveillance
- More focused approach
- Control of reintroduction
- Mass screening and treatment
and/or Mass drug administration



Asia Pacific Malaria Elimination Network (APMEN)

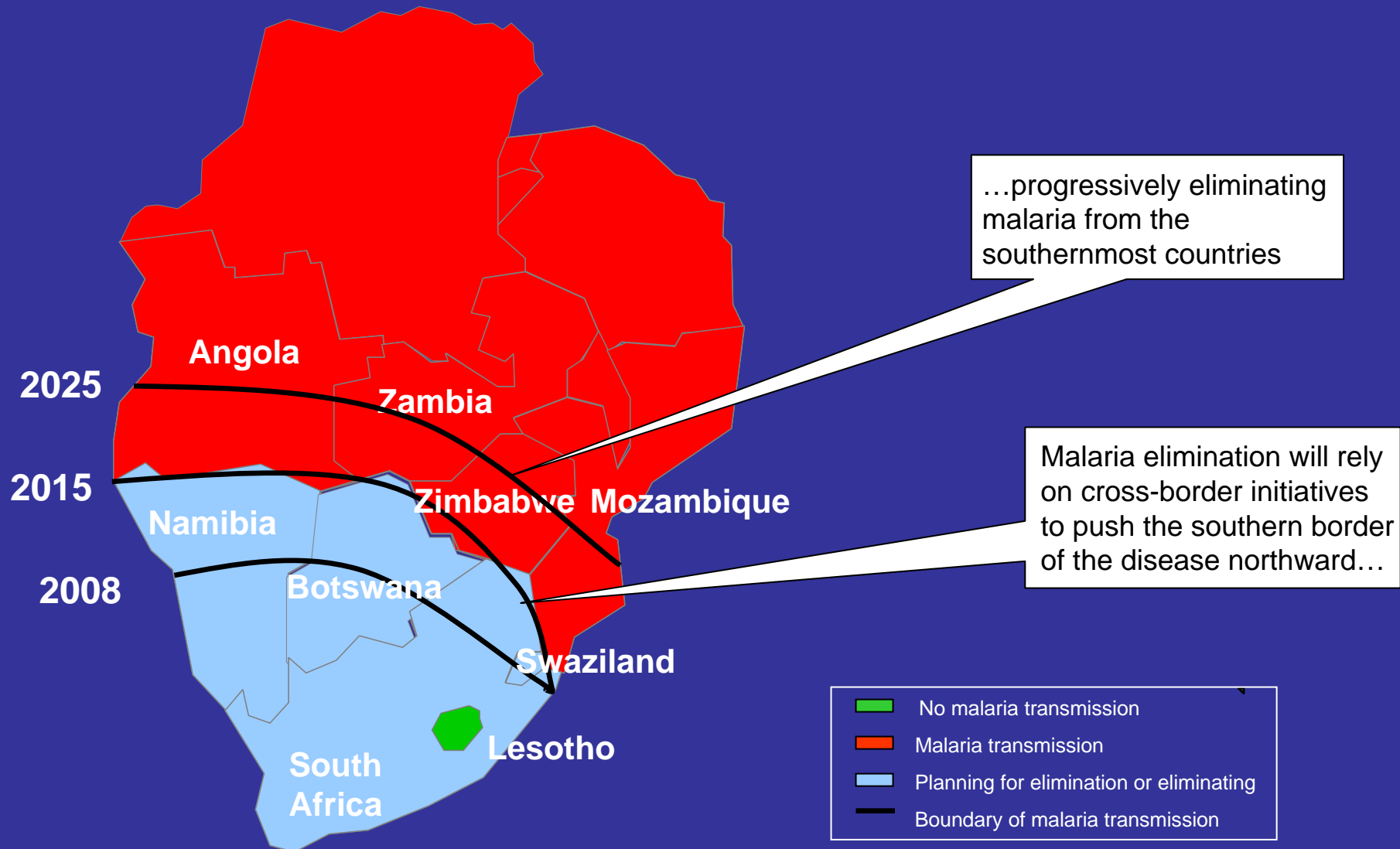


Bhutan
China
DPRK
Indonesia
Malaysia
Philippines
Solomon Islands
ROK
Sri Lanka
Vanuatu

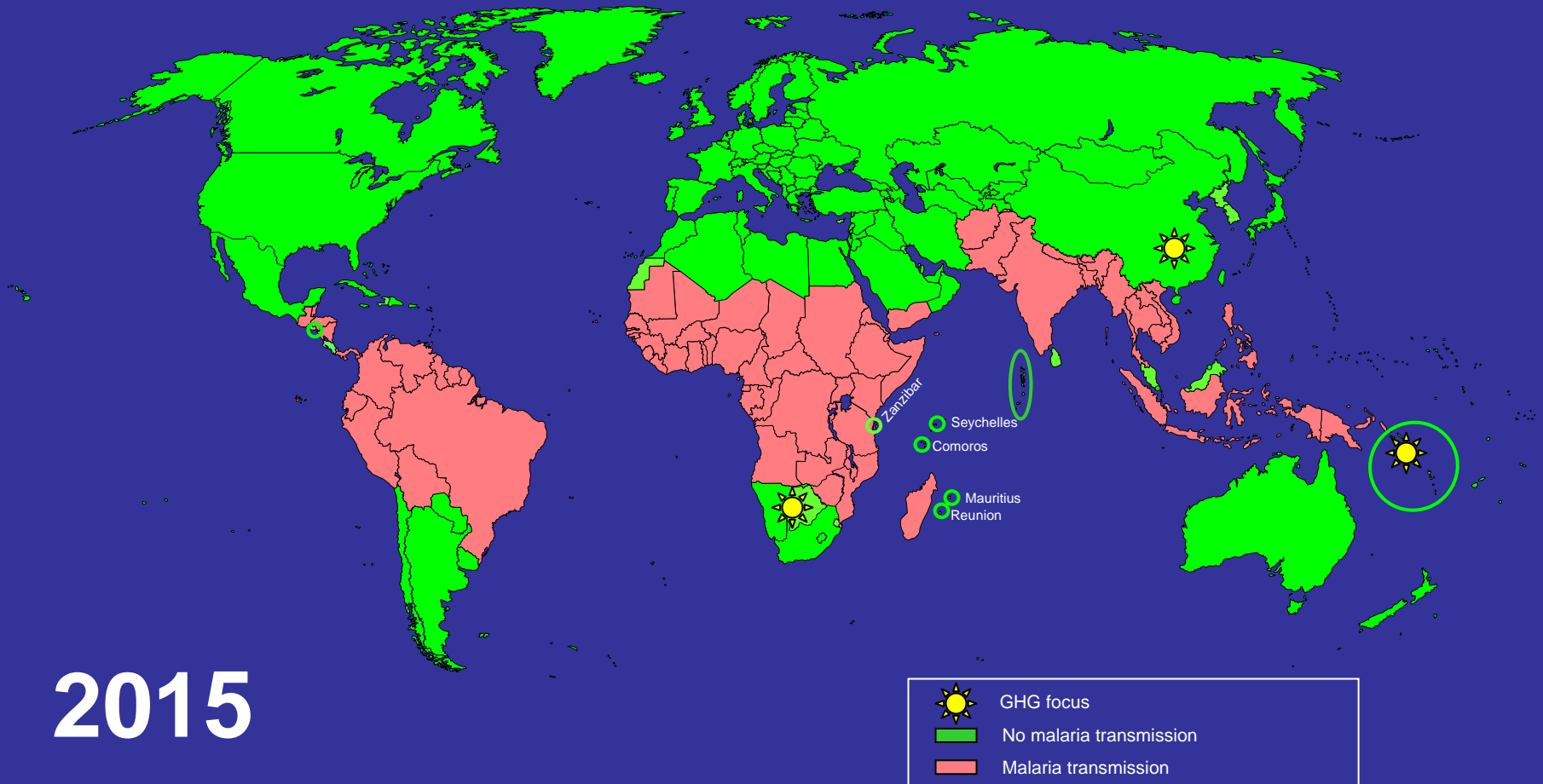
*Other countries to be included as progress toward elimination is made.



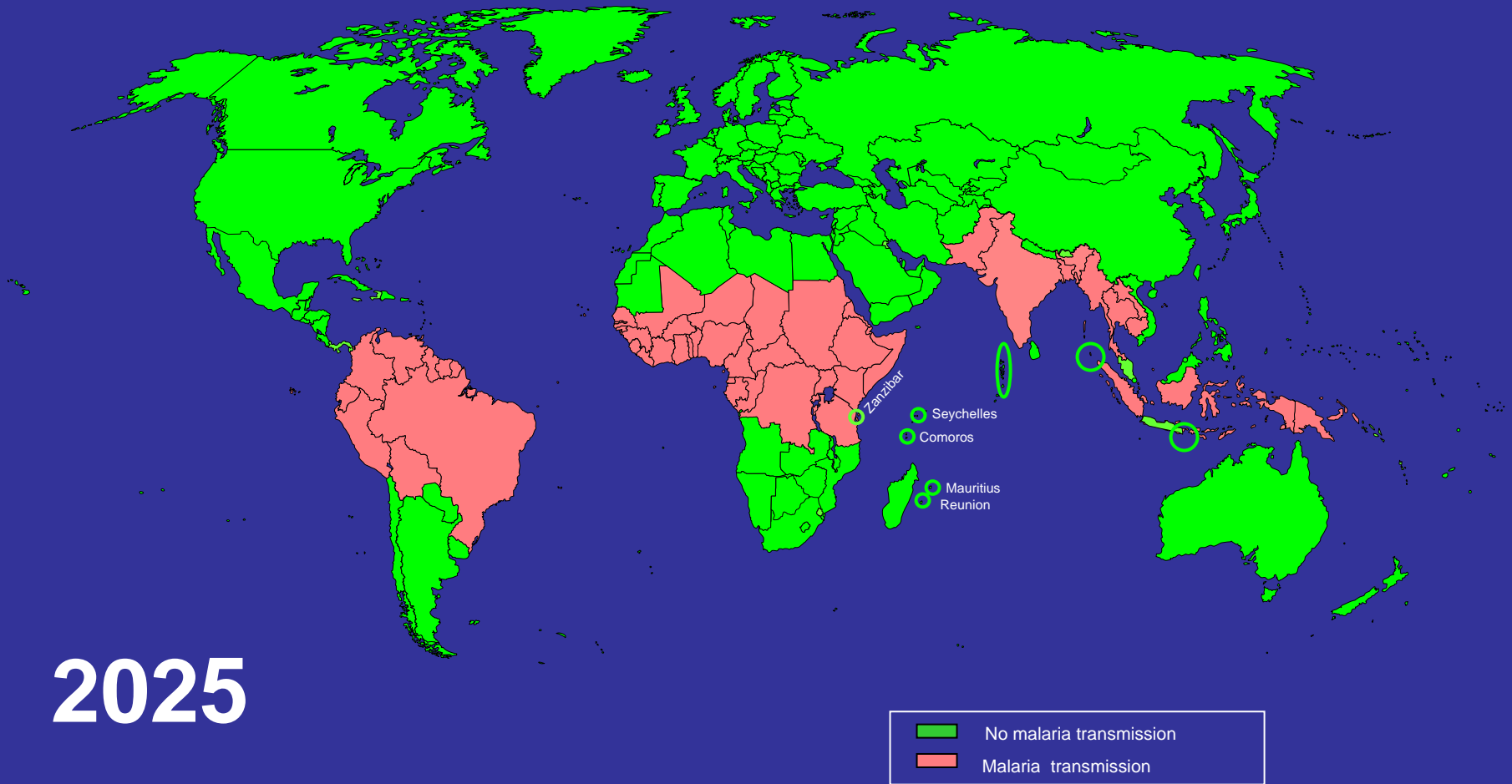
Southern Africa Elimination Strategy



The Boundaries of Malaria Transmission By Country



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Providing Guidance to the 39 Eliminating Countries

