

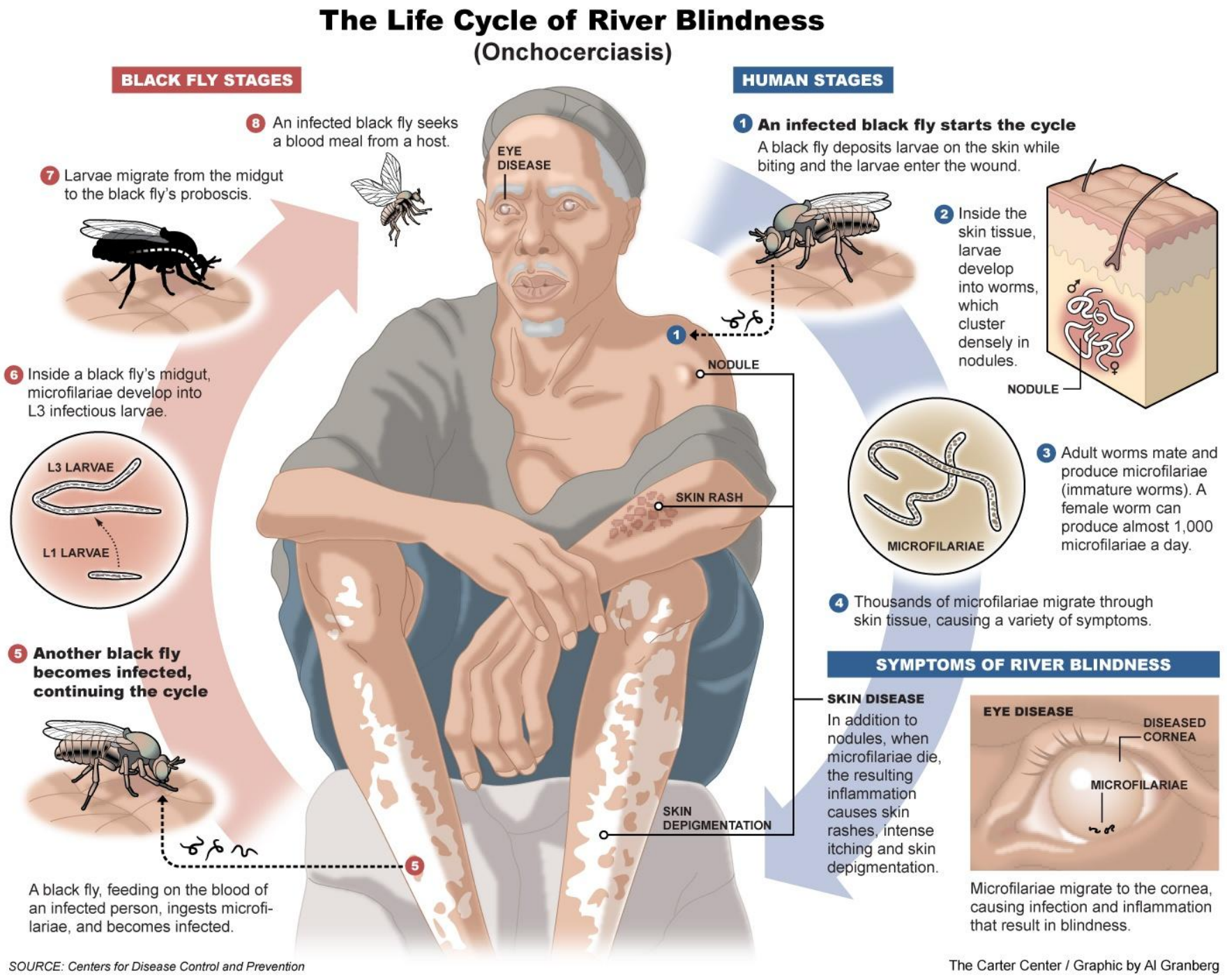
cbm
Global Disability Inclusion

Onchocerciasis & Trachoom

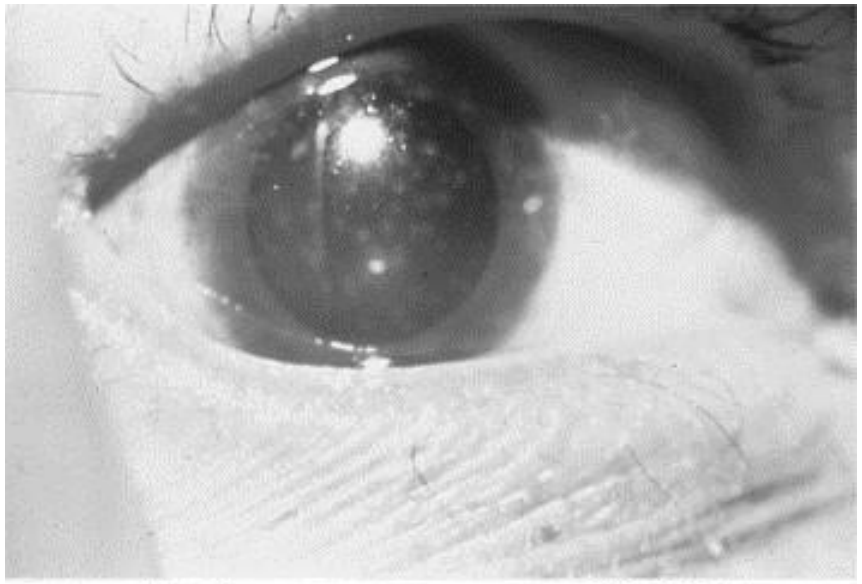
Onchocerciasis

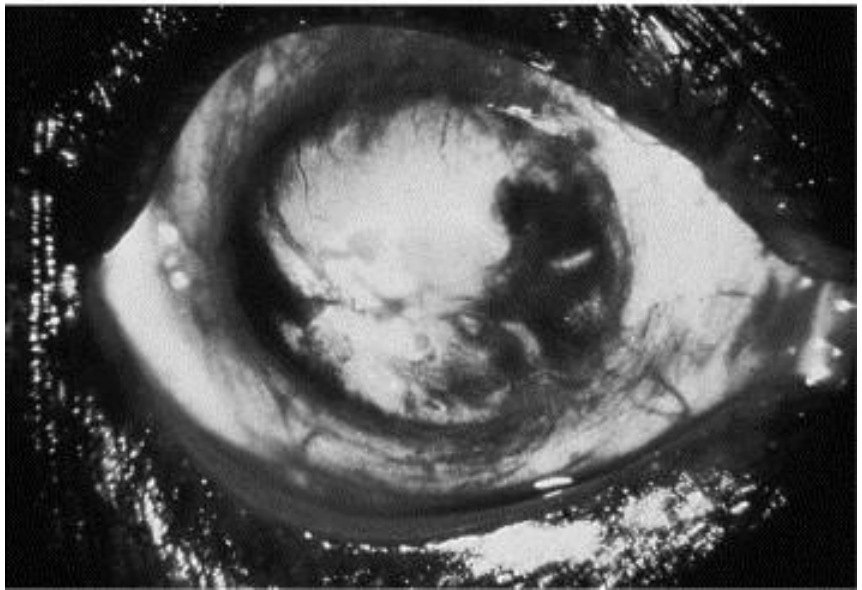


Onchocerca volvulus



Affects skin and eyes





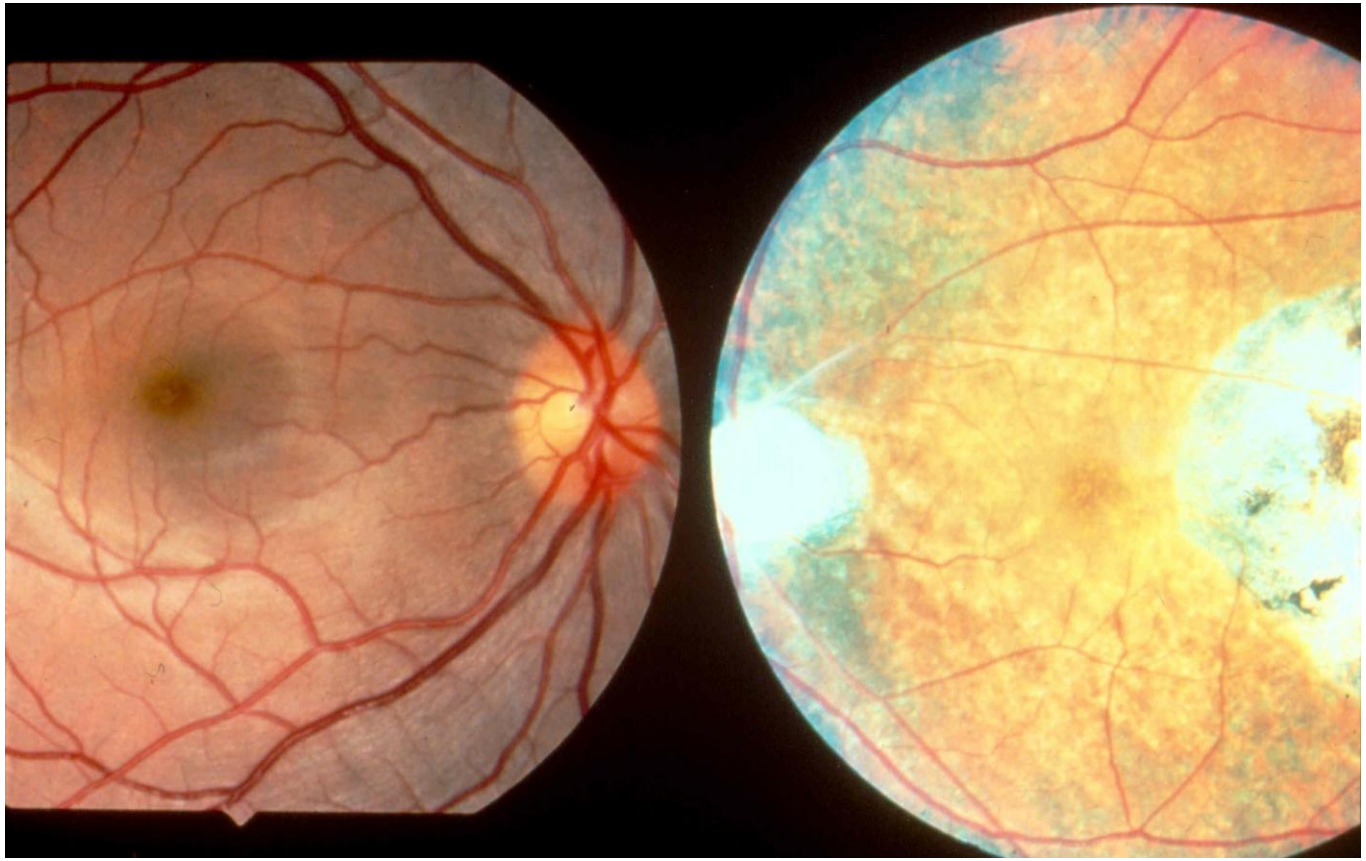




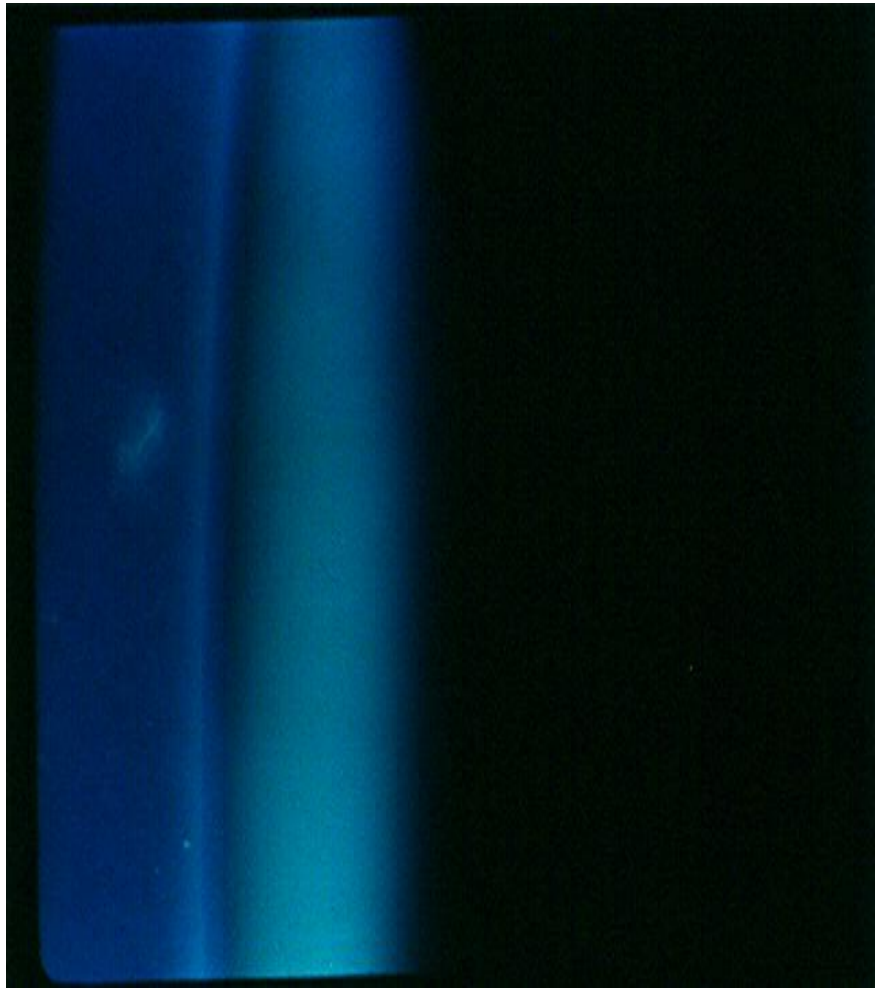


Onchocerciasis





Punctate Keratitis





Photos Roberto Proana

Socio economische impact

- A family disease and tragedy:
  example: blind young woman & mother
  - è 10 years premature death for herself
  - è Most likely to be abandoned by husband
  - è Increased infant morbidity & mortality
  - è No childhood & uncertain future for attending child
  - è Poor education for all her children



Hele dorpen verhuisden



1974: Onchocerciasis Control Program

WORLD BANK

UNDP

World Health Organization

FAO
FIAT PANIS









Mectizan Donation Program

- In October 1987 Mectizan registered.
- Pledge to donate: “for as long as needed to as many as need it”
- Major example of Public-Private Partnership







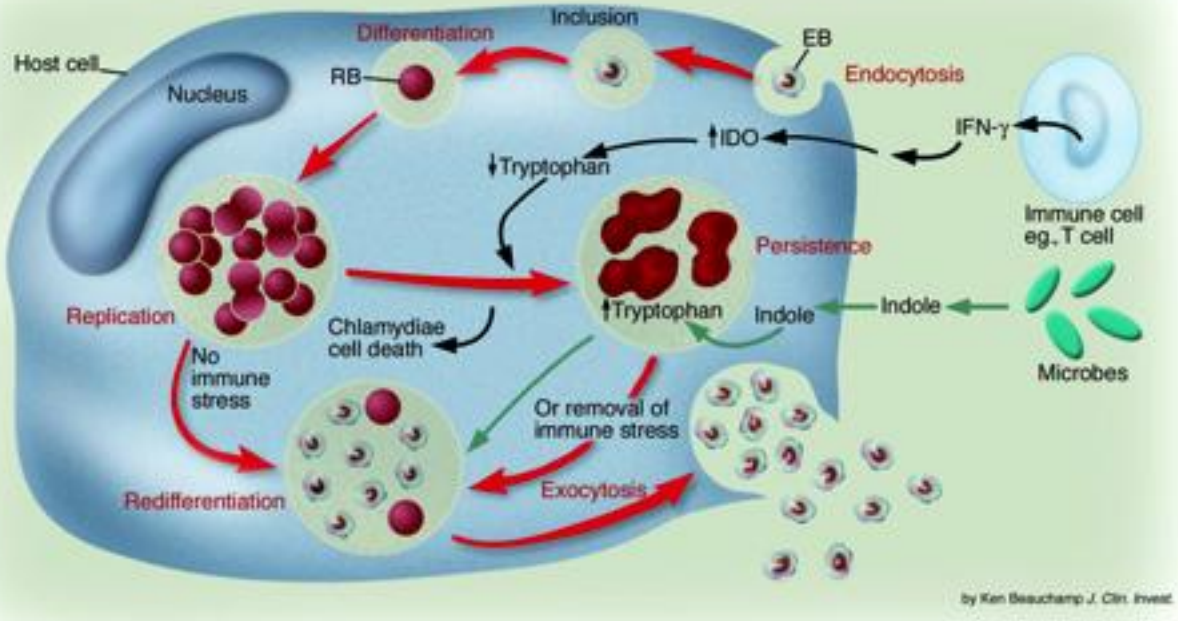
Trachoom



The Quiet American

Chlamydia trachomatis

- **Obligate intracellular energy deficient, with two stage cycle:**
  - **elementary body (EB)**
  - **reticulate body (RB)**

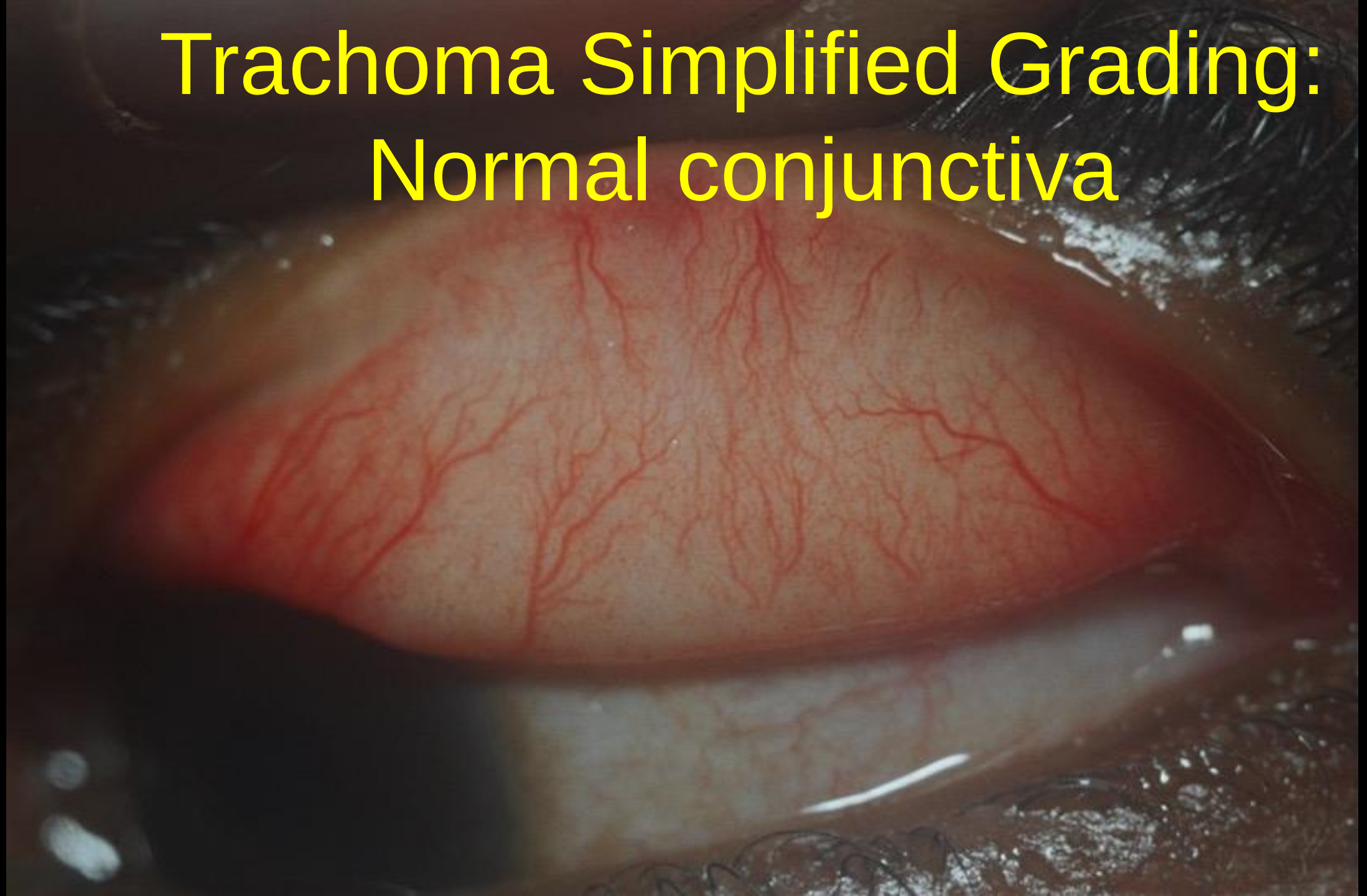


- **Different serovars:**
  - **A, B, Ba, C: trachoma**
  - **D – K: STD**
  - **L1, L2, L3: Lymphgranuloma venerum**

Pathogenesis

- Each infection gives self-limiting conjunctivitis: first infection can take a long time to heal
- Repeat infections give chronic inflammation
- Immunity developed, but does not give complete protection (reduced intensity? Reduced duration?)

Trachoma Simplified Grading: Normal conjunctiva



Inflammatory Trachoma - Follicular (TF)



Inflammatory Trachoma - Intense (TI)



Trachomatous Scarring (TS)



Trachomatous Trichiasis (TT)



Corneal Opacity (CO)



SAFE strategy



SURGERY

for inturned eyelashes



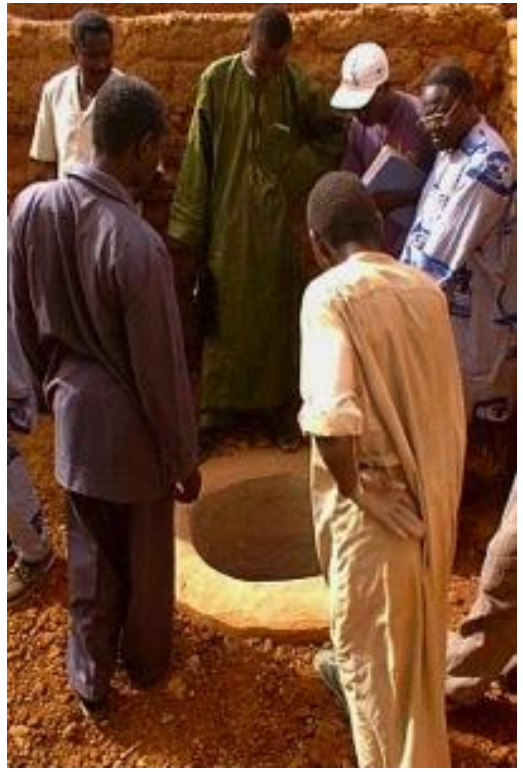
ANTIBIOTICS

Pfizer-donated Zithromax® to treat active infection



FACIAL CLEANLINESS

to prevent disease Transmission



ENVIRONMENTAL CHANGE

to increase access to water and sanitation

History Trachoma

Hieroglyphs on ancient Nubian tombs in Sudan show eyes and tweezers

mentioned in the Ebers Papyru

French and British troops got infected in Egypt during the Napoleonic wars

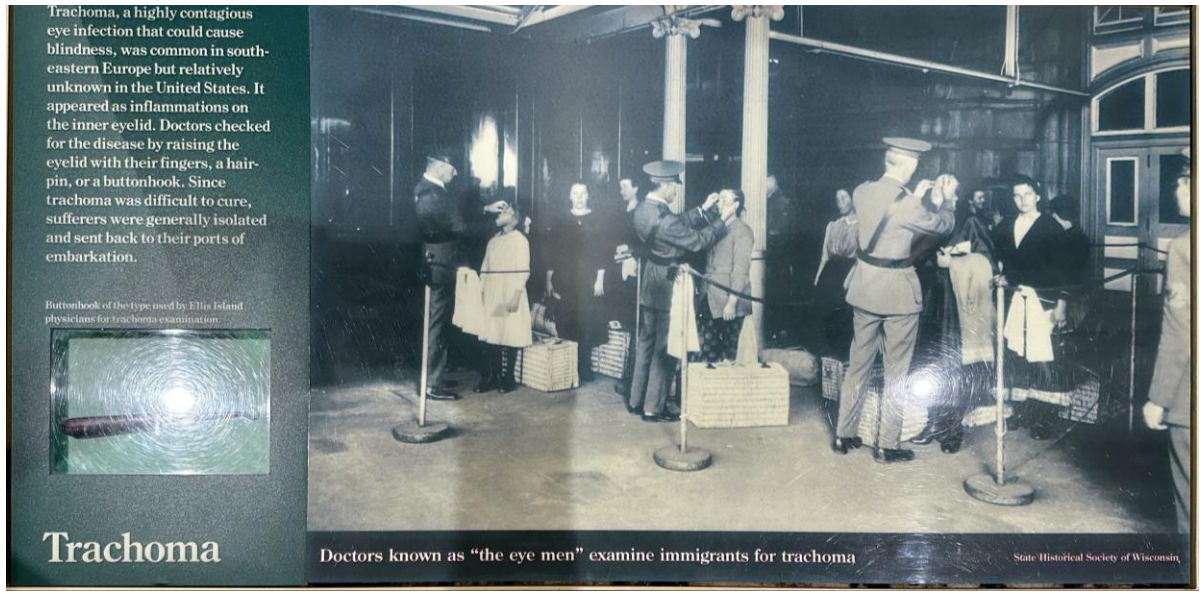






The Godfather part 2




Trachoma, a highly contagious eye infection that could cause blindness, was common in south-eastern Europe but relatively unknown in the United States. It appeared as inflammations on the inner eyelid. Doctors checked for the disease by raising the eyelid with their fingers, a hair-pin, or a buttonhook. Since trachoma was difficult to cure, sufferers were generally isolated and sent back to their ports of embarkation.
Buttonhook of the type used by Ellis Island physicians for trachoma examination
Trachoma
Doctors known as "the eye men" examine immigrants for trachoma
State Historical Society of Wisconsin



Trachoma prioriteit voor de WHO

A brief history of the World Health Organization

In the 1800s, markedly increased trade and travel with the East led to outbreaks of cholera and other epidemic diseases in Europe. In response to cholera epidemics in 1830 and 1847, which killed tens of thousands in Europe, the first International Sanitary Conference was convened in Paris in 1851. At the time, the cause of cholera was unknown and due to political differences little was accomplished at this or the next several meetings. Nonetheless, the conferences were the first attempt at establishing a mechanism for international cooperation for disease prevention and control. The effort finally paid off with the adoption in 1892 of the International Sanitary Convention for the control of cholera and 5 years later with a Convention that addressed control of the plague.

In the Americas, the forerunner of the Pan American Health Organisation (PAHO), the International Sanitary Bureau, was established in 1902, making PAHO the oldest international health agency in the world. In Europe, L'Office International d'Hygiene Publique was established in 1907, and in 1919 the League of Nations established the Health Organisation of the League of Nations in Geneva. In 1926, the International Sanitary Convention was revised to include provisions against smallpox and typhus. The last International Sanitary Conference was held in Paris in 1938 on the eve of World War II.

Rights were not granted to include this image in electronic media. Please refer to the printed journal.

Wellcome Library, London

Doctors parade dummy representing cholera, by Heath, 1832

Immediately after World War II, in 1945, the UN Conference on International Organisations in San Francisco voted to establish a new international health organisation and a year later the International Health Conference in New York approved the Constitution of the World Health Organisation.

Between 1946 and 1948 an Interim Commission, with 18 states, took over the work of L'Office International d'Hygiene Publique, the Health Organisation of the League of Nations, and the Health Division of the UN Relief and Rehabilitation Administration. In 1948, the WHO Constitution obtained enough signatures to bring it into force. The Pan American Health Organisation became one of WHO's six regional organisations.

The First World Health Assembly met in Geneva in the summer of 1948 and established as priorities for the organisation: malaria, tuberculosis, venereal diseases, maternal and child health, sanitary engineering, and nutrition. The organisation had a budget of US$5 million in 1948. In addition, the Organisation was involved in wide-ranging disease prevention and control efforts including mass campaigns against yaws, endemic syphilis, leprosy, and trachoma.

Michael McCarthy

WORLD HEALTH ORGANIZATION
Prevention of Blindness and Deafness

WHO/PBL/97.61 Rev.2
Distr.: General
Original: English

Global Initiative for the Elimination of Avoidable Blindness

Section 2
Outline of main activities within a Global Initiative for the Elimination of Avoidable Blindness

Introduction 8

2.1 Control of major causes of blindness

Cataract 8

Trachoma 13

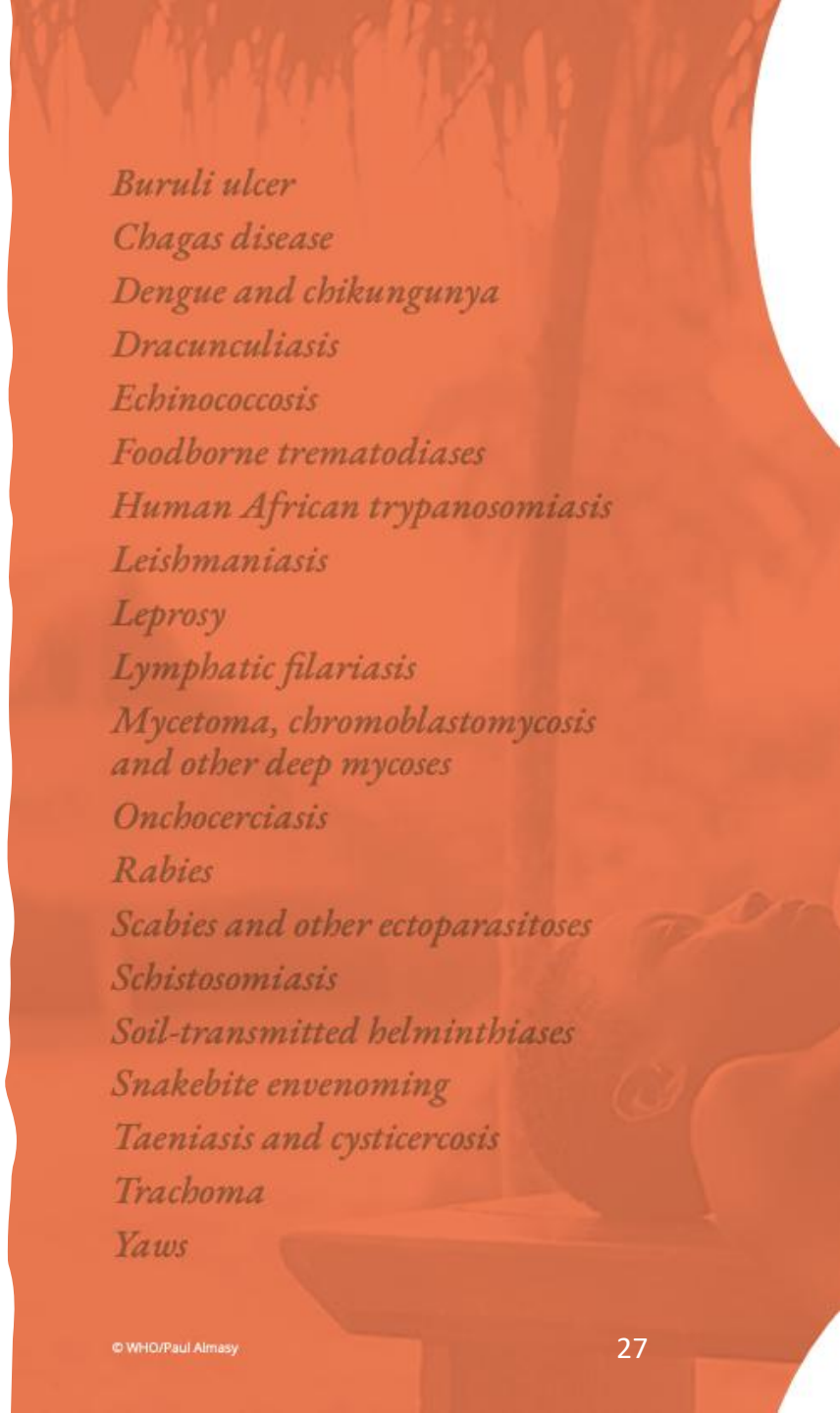
Onchocerciasis 15

Childhood blindness 16

Vitamin A deficiency 17
Surgically avoidable causes 18

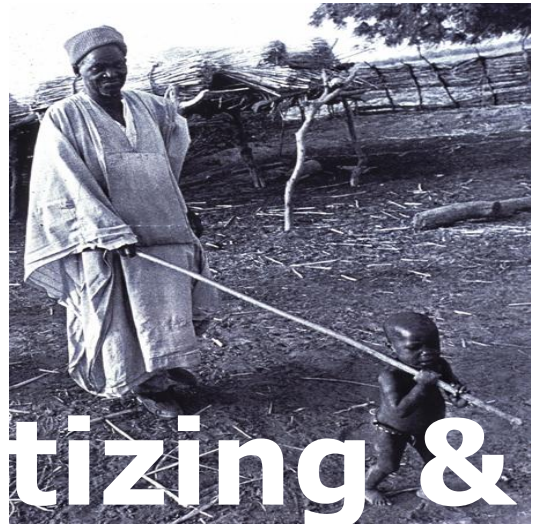
Refractive errors and low vision 19

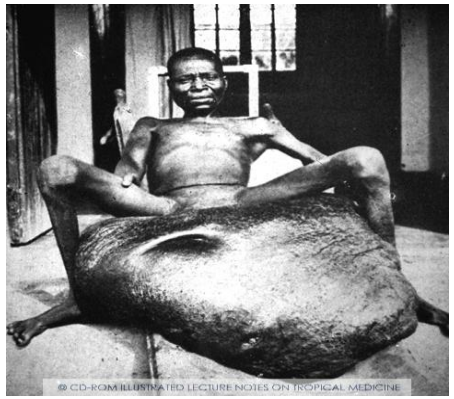
Neglected Tropical Diseases

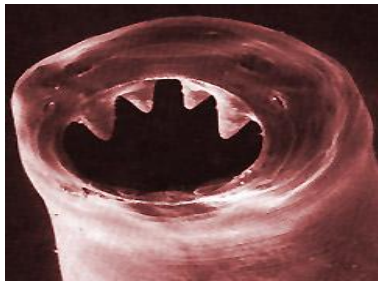


Chronic, disfiguring, stigmatizing & disabling













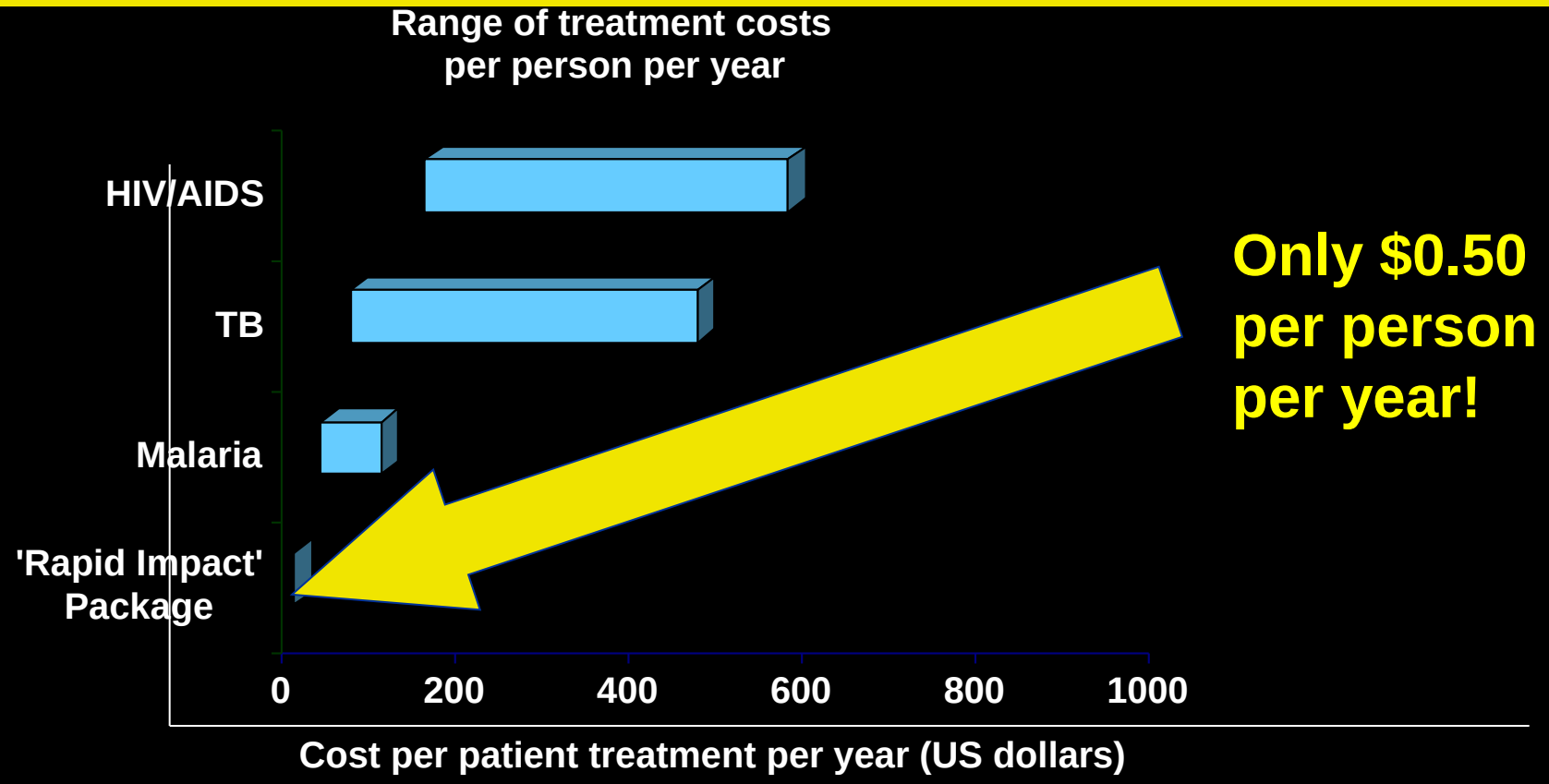




Global Burden of NTDs:
56.6 million DALYs More than Malaria, TB, and 2/3 AIDS

DISEASE	DALYs
Lower Respiratory Infections	91.4 million
HIV/AIDS	84.5 million
Unipolar Depression	67.3 million
Diarrheal Disease	62.0 million
Ischemic Heart Disease	58.6 million
Neglected Tropical Diseases	56.6 million
Cerebrovascular Diseases	49.2 million
Malaria	46.5 million
Road Traffic Accidents	38.7 million
Tuberculosis	34.7 million

Rapid Impact Package
Albendazole/Mebendazole + Praziquantel + Ivermectin/DEC + Azithromycin



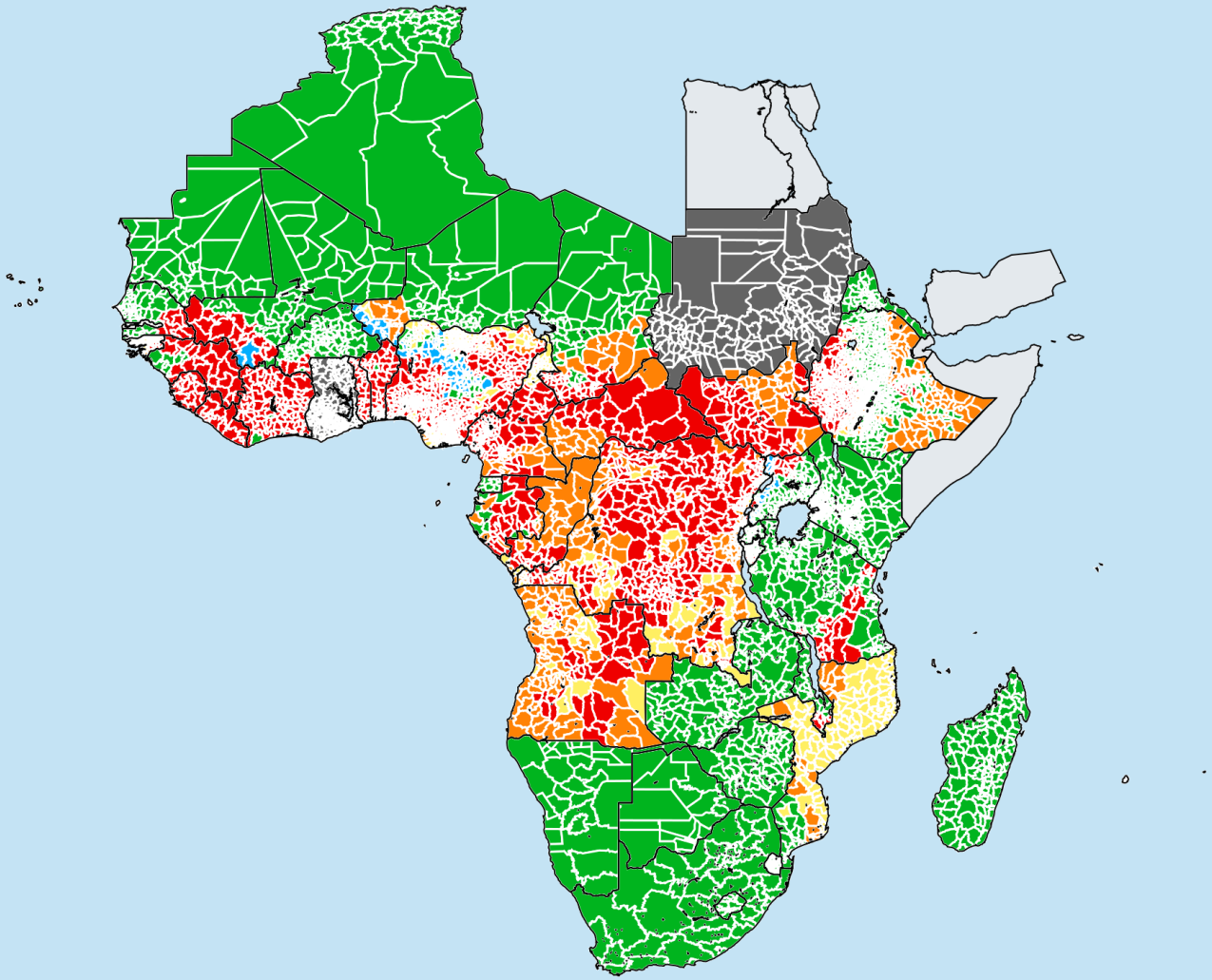
One of the "Best Buys" in Public Health



Onchocerciasis

Africa Continent (2020)

Status of Onchocerciasis Elimination



Onchocerciasis > Endemicity

- Not suitable for Onchocerciasis
- Endemic (requiring MDA)
- Unknown (under LF MDA)
- Under post-intervention surveillance
- Unknown (consider Oncho Elimination Mapping)
- No data available

more than 240 million people live in areas known to be endemic for onchocerciasis, in 2020: 112 million treatments

Boundaries, names and designations used here do not imply expression of WHO opinion concerning the legal status of any country, territory or area, or of its authorities, or concerning delimitation of frontiers or boundaries. Dotted / dashed lines represent approximate border lines for which there may not yet be full agreement.

Data Source:
Data provided by health ministries to ESPEN through WHO reporting processes. All reasonable precautions have been taken to verify this information

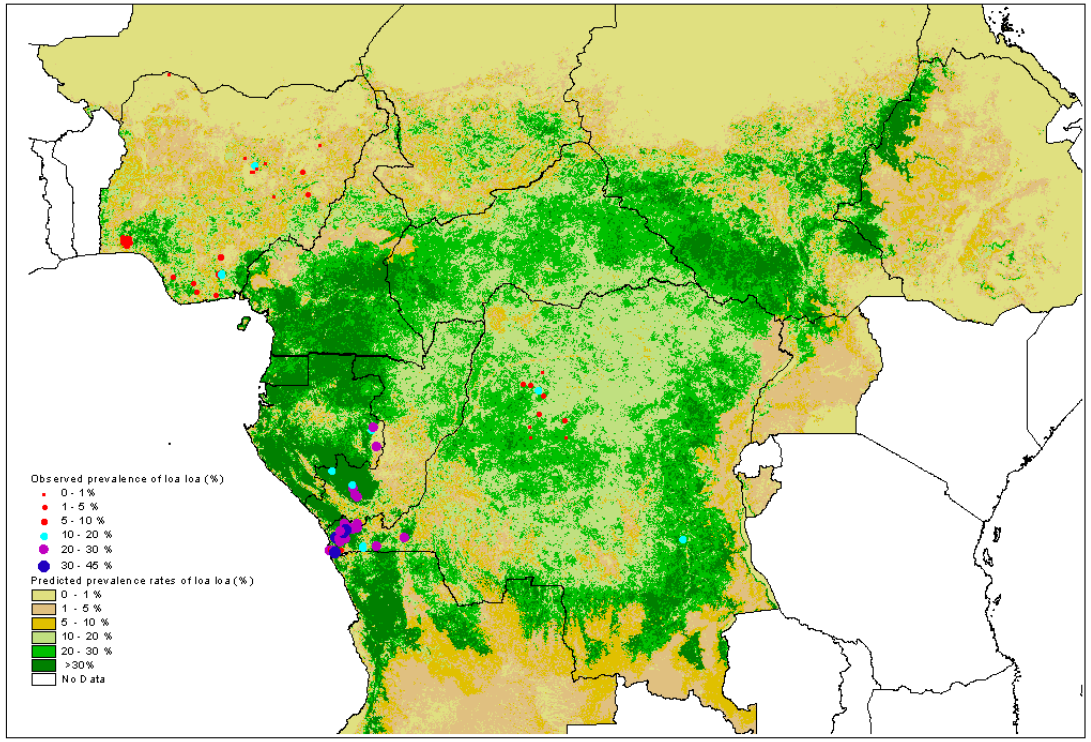
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ESPEN EXPANDED SPECIAL PROJECT FOR ELIMINATION OF NEGLECTED TROPICAL DISEASES

World Health Organization REGIONAL OFFICE FOR Africa

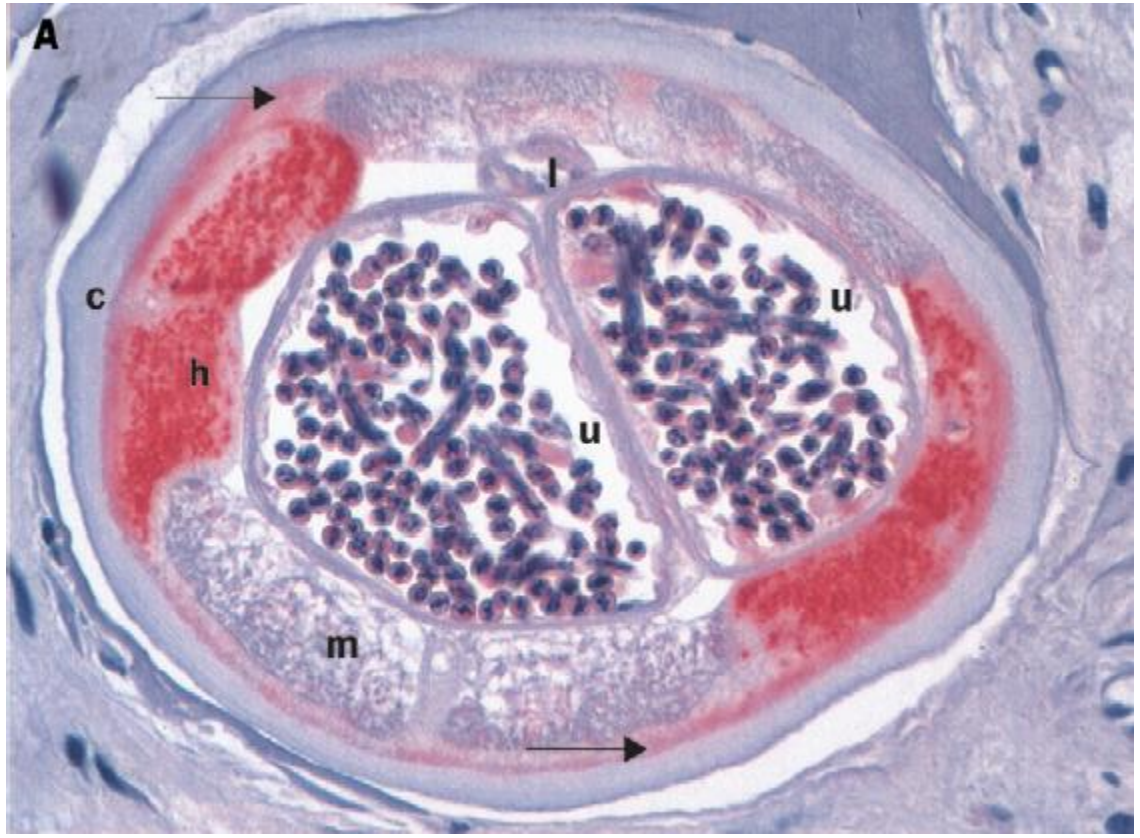
Challenge Loiasis



- Loa loa is present in many of the areas remaining to be treated. In DRC in December 2003 there were 14 deaths.

- Co-endemicity of Onchocerciasis with Loa-Loa
- Treatment of patients with high Loa-Loa mf levels. Above 10,000 per ml of blood encephalopathy is possible and above 30,000 mf per ml of blood likely.

Wolbachia spp.



Control (no doxycycline)

h= hypodermal cord with bacteriae red;

u= uterus with embryo's



Worm after treatment with doxycycline;

h= hypodermal cord no bacteriae;

u= uterus with degenerated embryos

Hoerauf,A., et.al.. The lancet, vol 355: 9211; 1242-43

PLOS | NEGLECTED TROPICAL DISEASES

VIEWPOINTS

Potential Value of Triple Drug Therapy with Ivermectin, Diethylcarbamazine, and Albendazole (IDA) to Accelerate Elimination of Lymphatic Filariasis and Onchocerciasis in Africa

Peter U. Fischer[1]*, Christopher L. King[2], Julie A. Jacobson[3], Gary J. Weil[1]

1 Infectious Diseases Division, Department of Internal Medicine, Washington University School of Medicine, St. Louis, Missouri, United States of America, **2** Case Western Reserve University, Cleveland, Ohio, United States of America, **3** Bill and Melinda Gates Foundation, Seattle, Washington, United States of America

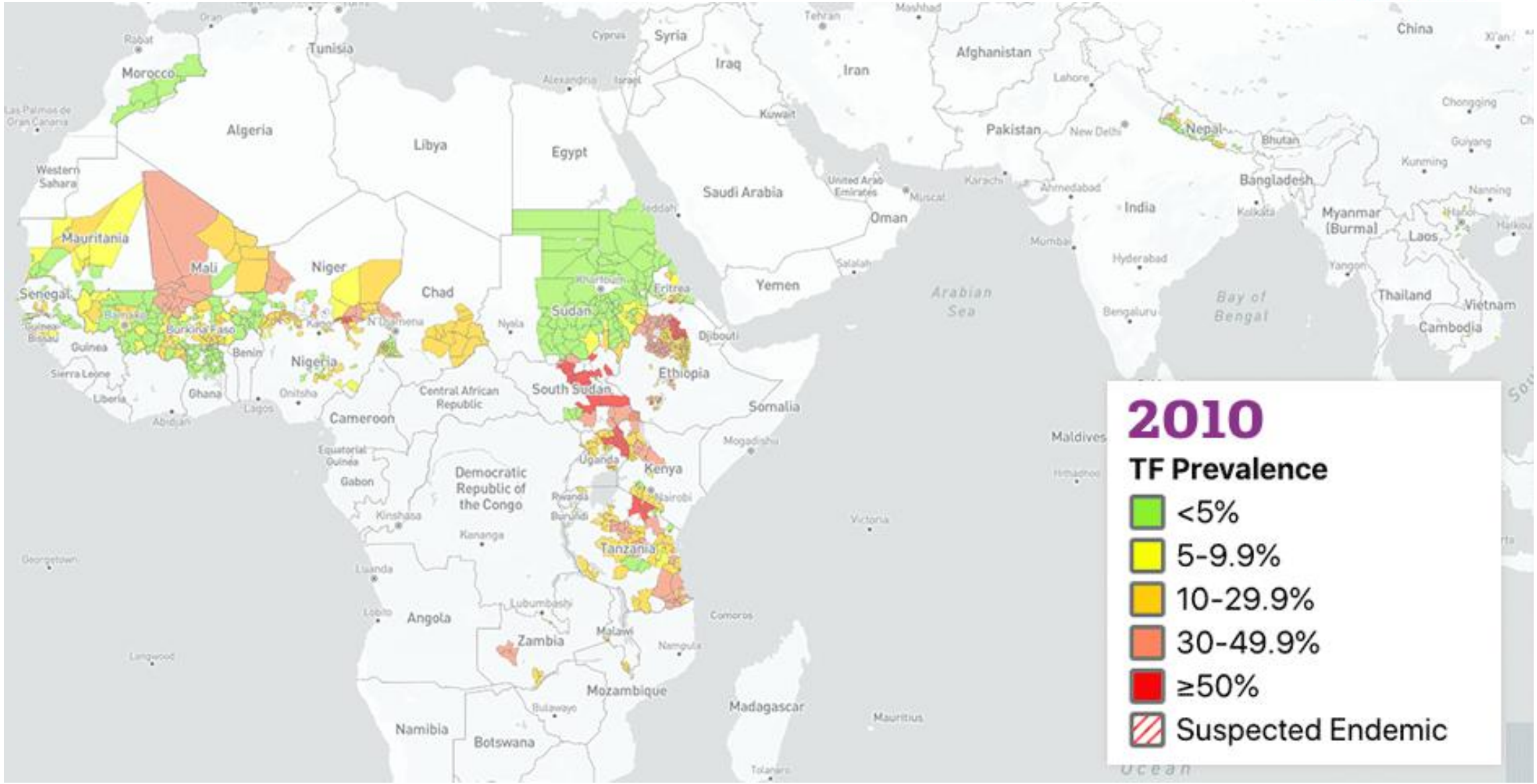
* Pufische@DOM.wustl.edu

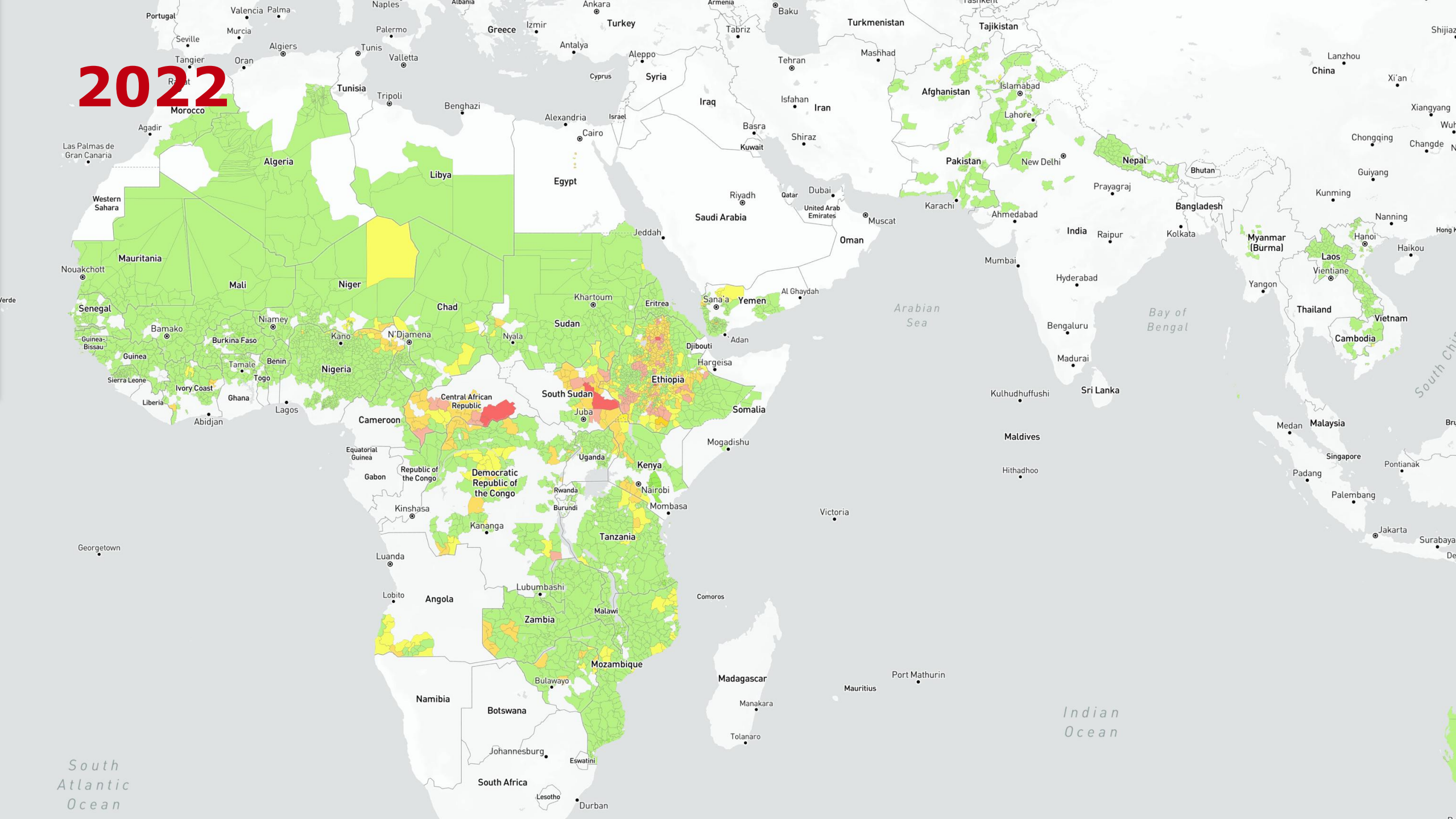
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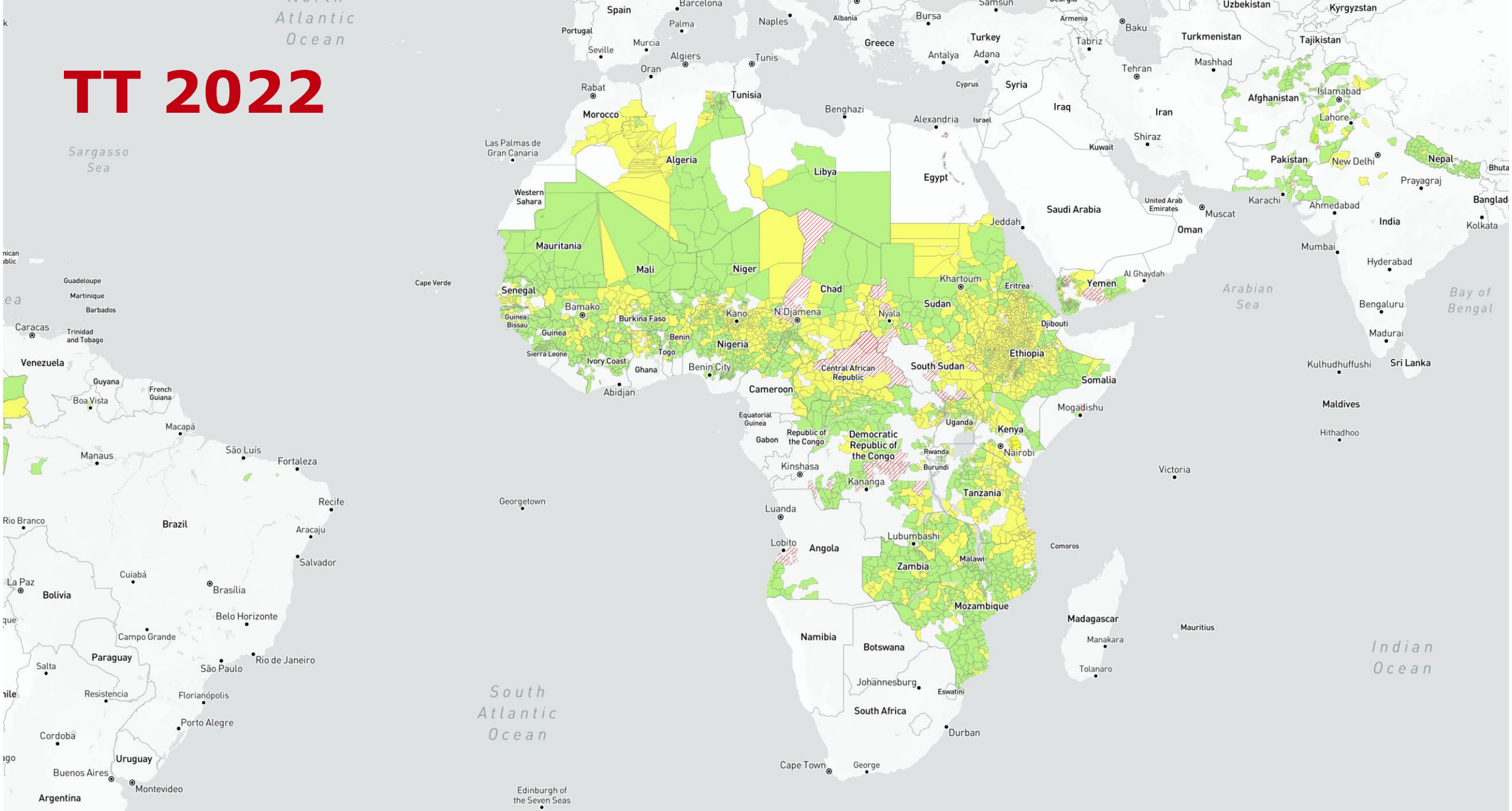
Trachoma

Trachoma: 2010-2020




2022
Portugal
Valencia
Palma
Naples
Albania
Armenia
Baku
Turkmenistan
Tajikistan
Seville
Murcia
Palermo
Greece
Izmir
Turkey
Ankara
Tabriz
Tangier
Oran
Algiers
Tunis
Valletta
Antalya
Aleppo
Tehran
Mashhad
Lanzhou
China
Xi'an
Cyprus
Syria
Afghanistan
Islamabad
Tunisia
Tripoli
Benghazi
Iraq
Isfahan
Iran
Morocco
Agadir
Alexandria
Israel
Cairo
Basra
Lahore
Xiangyang
Las Palmas de Gran Canaria
Shiraz
Chongqing
Changde
Kuwait
Algeria
Libya
Egypt
Pakistan
New Delhi
Nepal
Bhutan
Guiyang
Western Sahara
Riyadh
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Dubai
Prayagraj
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Madurai
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Ethiopia
Sierra Leone
Togo
Ivory Coast
Kulhudhuffushi
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Lobito
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Comoros
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Madagascar
Bulawayo
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TT 2022



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