



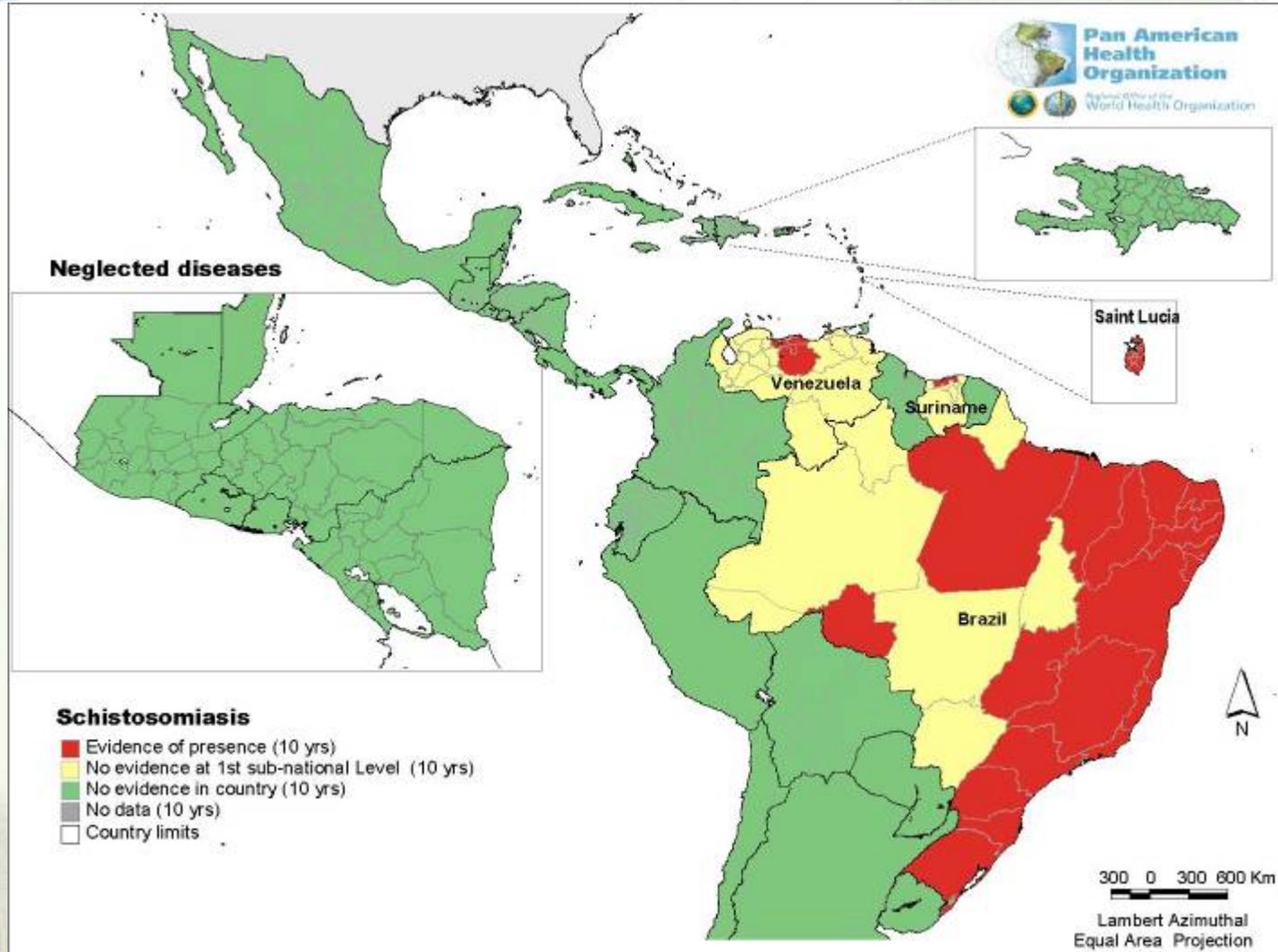
Elimination of Neglected Diseases and other Infectious Diseases related to Poverty

Schistosomiasis



Schistosomiasis

Presence at subnational level, 1998–2007



Schistosomiasis endemic or recently ex-endemic countries/territories

- **Currently endemic:**

St. Lucia, Suriname, Venezuela, Brazil

- **Formerly endemic :**

Guadalupe, Martinique, Dominican Rep.,
Puerto Rico



Schistosomiasis

Presence at subnational level, 1998–2007

Epidemiology

- 4 Countries
- 39 Sub national Units
- 25 million people living at risk, mainly in Brazil
- 1 to 3 million people are estimated to be infected

Strategy

- MDA to school age children, reaching at least 75% coverage
- Improve access to drinking water and sanitation
- Health education

Goal

To reduce the prevalence and the parasitic load (as measured by egg counts) in high transmission areas to less than 10%

Resolution

WHA 54.19 (2001)



Process Indicators (school-based programs)

- **Number of schools enrolled in the program**
- **Percentage of schools enrolled in the program**
 - Numerator: total number of schools enrolled in the program
 - Denominator: total number of schools existing in the intervention area
- **Number of training sessions given to teachers**
- **Percentage of schools with a trained teacher**
- **Number of tablets administered**
- **Number of tablets returned by the teachers.**
- **Coverage**
 - Numerator: number of school age children that received the treatment
 - Denominator: number of school age children in the intervention area
- **Percentage of classrooms that participated in at least one health education activity**

**Source: WHO. Helminth Control in School-Age children. 2002*



Parasitological Indicators

- Prevalence of infection by intestinal schistosoma
Numerator: number of children infected by intestinal schistosoma
Denominator: total number of children investigated
- **Prevalence of moderate to high intensity intestinal schistosoma infections**
Numerator: number of children with high to moderate-intensity intestinal schistosoma infections
Denominator: total number of children investigated

Intensity of schistosoma infection

Helminth	Intensity threshold		
	Mild	Moderate	High
<i>Schistosoma mansoni</i>	1-99 epg	100-399 epg	\geq 400 epg

epg: eggs per gram of feces

*Source: WHO. *Helminth Control in School-Age children*. 2002



Morbidity Indicators

- **Proportion of children with clinical signs or symptoms**

Numerator: number of children with specified clinical signs or symptoms
(e.g., liver lesions detected by ultrasound)

Denominator: total number of children examined for that sign or symptom

- **Percentage of children suffering anemia (proxy)**

Numerator: number of anemic children (haemoglobin < 11g/dl)

Denominator: total number of children investigated for haemoglobin status

- **Percentage of children suffering severe anemia (proxy)**

Numerator: number of children with severe anemia (haemoglobin < 7g/dl)

Denominator: total number of children investigated for haemoglobin status



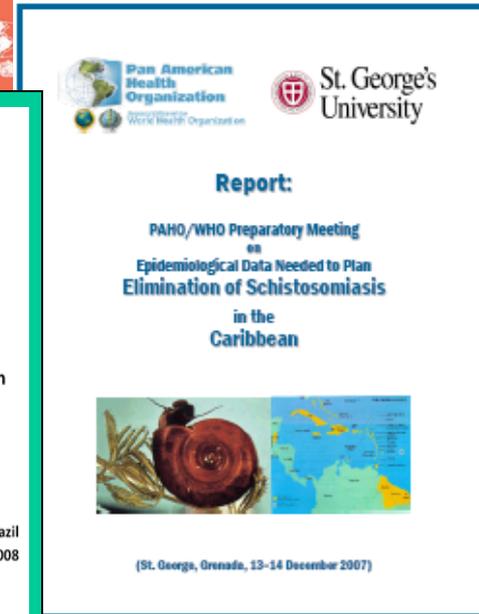
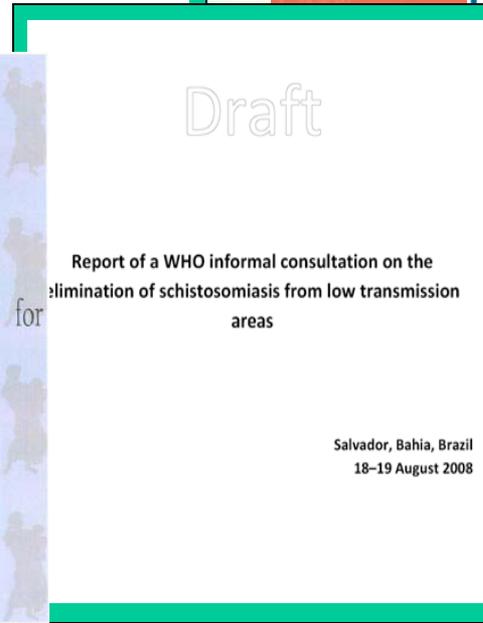
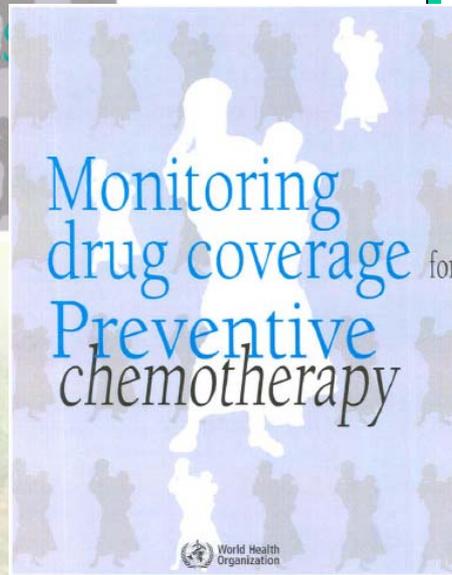
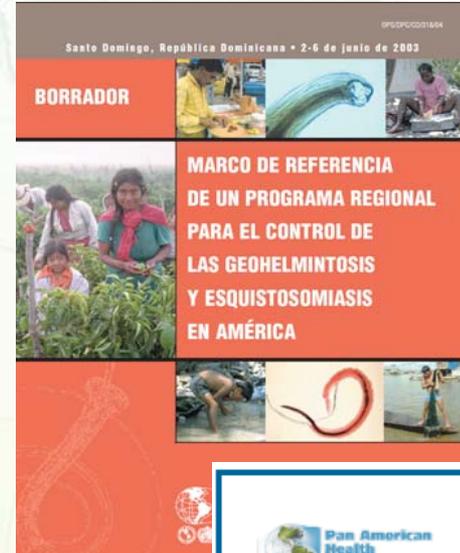
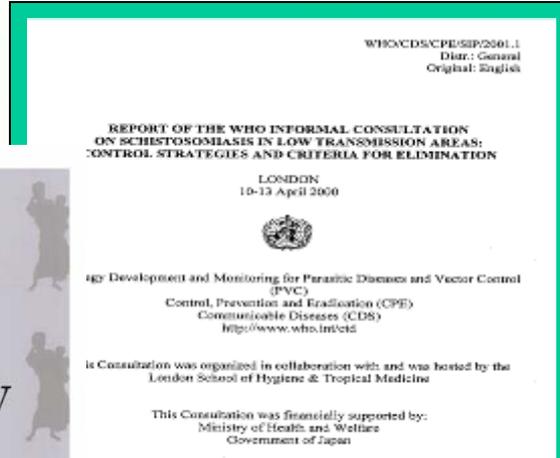
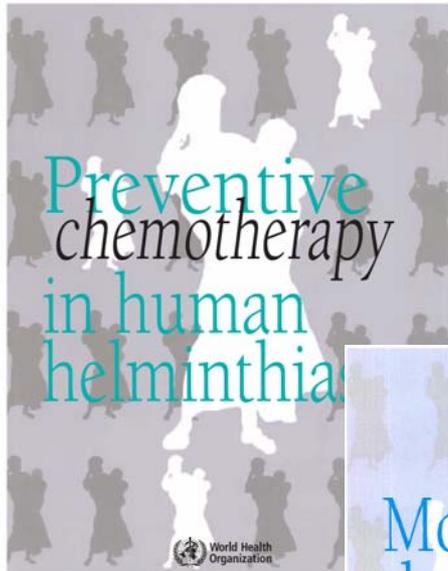
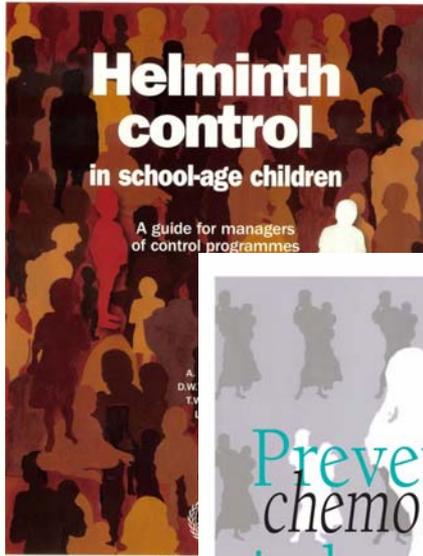
Indicators for the monitoring of impact of preventive chemotherapy interventions

- In School-age Children:
- Prevalence of infection (parasitological methods)
- Intensity of infection (proportion of heavy intensity infections)
- Prevalence of anemia
- Prevalence of liver damage (lesions) detected by ultrasound.

*WHO. Preventive Chemotherapy for Human Helminthiasis.2006, Table 3.



Key documents



Gaps

- 4.3 million of school age children & 1.8 million pre- school age children may need annual Massive Drug Administration
- Survey + scale up for elimination: Suriname & St. Lucia
- Survey + Scale up for control: Brazil & Venezuela
- Surveys + Mapping for verification of interruption of transmission: Dominican Republic, Puerto Rico, Martinique, Guadalupe
- Regional criteria for schistosomiasis elimination in low endemicity areas



Quick wins

- Determine if transmission has been eliminated: Puerto Rico, Dominican Republic & French territories
- Map and begin MDA campaign: Suriname
- Eliminate transmission: St. Lucia



Discussion Points

- Low Transmission areas:
 - ✓ Usefulness of parasitological techniques
 - ✓ Usefulness of serological test for individual testing and for epidemiological surveillance
 - ✓ Usefulness of classical methods and/or molecular tools for monitoring of the snail host
 - ✓ MDA vs. individual/targeted/family treatment
- Coordination with activities of STH surveillance and control (surveys and massive drug administration)
- Snail surveys
- Follow-up surveillance after elimination



Thank you very much

