



Pan American
Health
Organization



World Health
Organization

REGIONAL OFFICE FOR THE **Americas**

Malaria in the Americas

Keith H. Carter,
Bogotá, Colombia,
3rd Mayo 2016



Organización
Panamericana
de la Salud



Organización
Mundial de la Salud
OFICINA REGIONAL PARA LAS Américas

Strategies and Plans

- **In 2011, PAHO Directing Council approved Resolution CD51.R9 (Strategy and Plan of Action for Malaria in the Americas 2011-2015):**
Achievement of global malaria targets, including malaria-related 2015 United Nations Millennium Development Goals (MDGs)
- **PLAN OF ACTION FOR MALARIA ELIMINATION 2016-2020:**
 - **presents an overview of the Region's progress vis-à-vis CD51.R9,**
 - **stipulates the Region's targets and commitments for the next five years**
 - **clarifies the components of an updated plan that addresses evolving challenges in the context of decreased malaria transmission, growing interest and progress in malaria elimination, and the need to prevent potential reestablishment of the disease.**
 - **presents a framework for reinforced integration of cross-cutting issues**

The Region's Commitment (2016-2030)

- A. Further reduction of malaria morbidity by $\geq 40\%$ (based on 2015 official figures)**
- B. Further reduction of malaria-related deaths by $\geq 40\%$ (based on 2015 official figures)**
- C. Implementation of efforts to eliminate malaria in 18 of 21 endemic countries; and attainment of malaria-free status in at least 4 countries**
- D. Implementation of innovative approaches to address challenges in countries where progress has been limited**
- E. Prevention of the re-establishment of malaria in countries that have been declared malaria-free.**

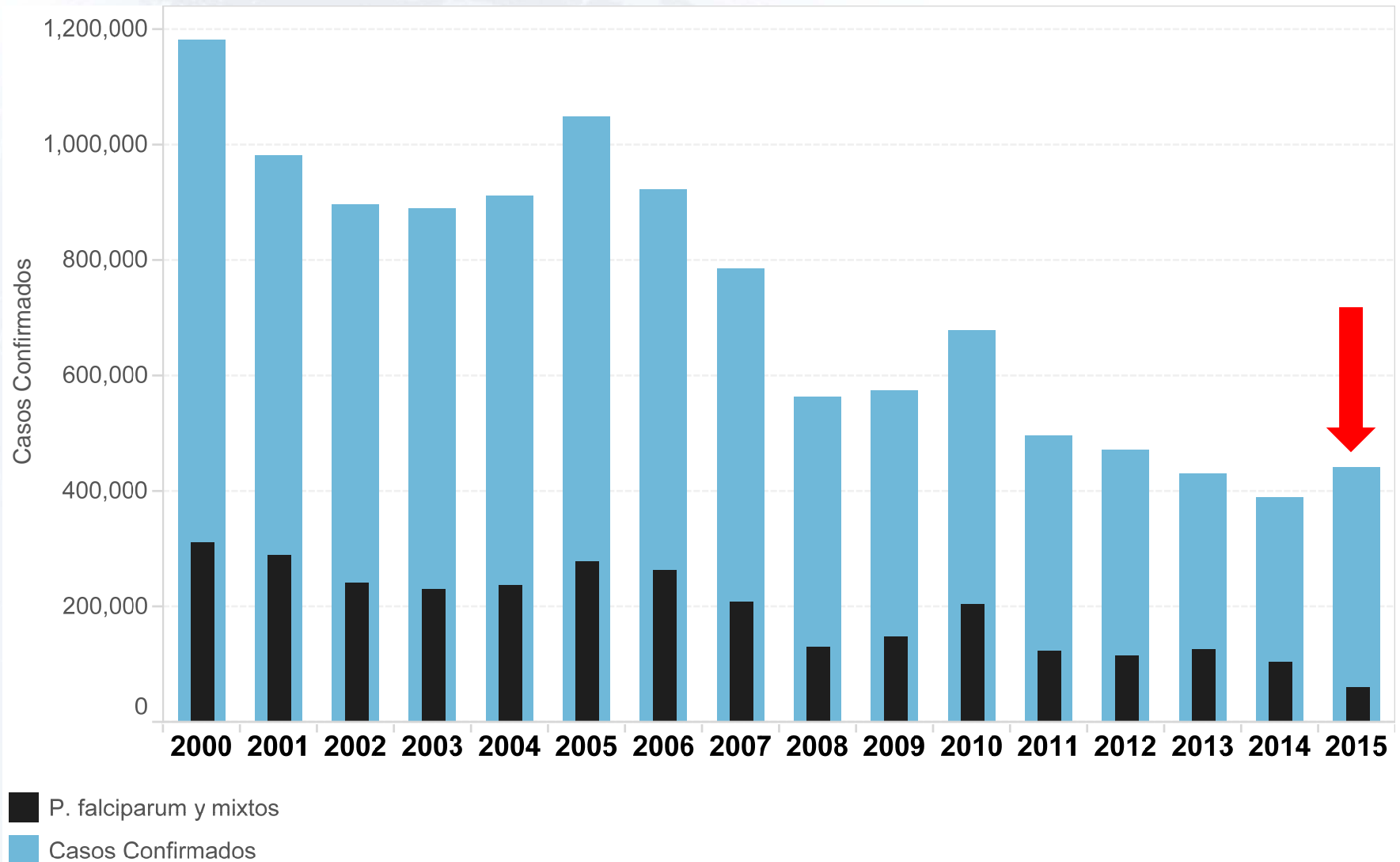
Progress in the fight against malaria...

- **389,390 cases (67% reduction); and 87 deaths (79% decrease) in 2014** relative to the 2000 baseline
- **69% *Plasmodium vivax*, 24% *P. falciparum* and mixed infections, and <0.1% *P. malariae*** (reported in, French Guiana, Guyana, and Venezuela)
- **Fourteen countries met the UN MDG target on malaria as of 2014; Two countries reported decreases of 50% to 75%; while three others, with reductions of < 50%, are making progress.**
- **18 of the Region's 21 malaria-endemic countries commitment towards malaria elimination**
- **Two countries continue to report increase in their total number of cases**

...but it is not yet over

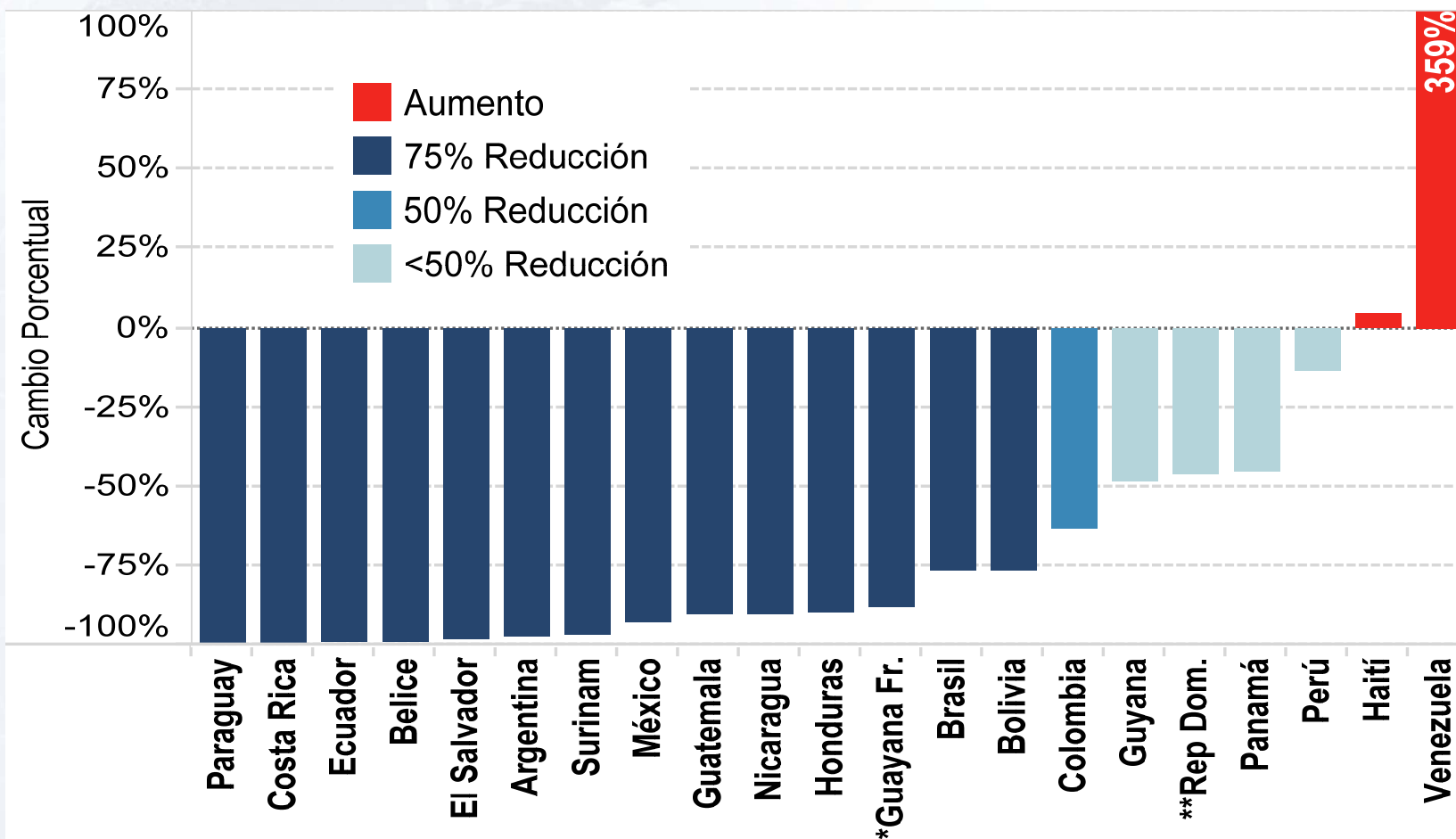
	2000	2005	2010	2011	2012	2013	2014
Argentina	440	252	72	18	4	4	3
Belize	1,486	1,549	150	79	37	26	19
Bolivia	31,469	20,142	13,769	7,143	7,415	7,342	7,401
Brazil	613,241	606,067	334,668	267,146	242,758	178,546	143,145
Colombia	144,432	121,629	117,650	64,436	60,179	51,722	40,768
Costa Rica	1,879	3,541	114	17	8	6	6
Dominican Republic	1,233	3,837	2,482	1,616	952	579	496
Ecuador	104,528	17,050	1,888	1,232	558	378	241
El Salvador	753	67	24	15	21	7	8
Fr. Guiana	3,708	3,414	1,608	1,209	900	875	448
Guatemala	53,311	39,571	7,198	6,817	5,346	6,214	4,931
Guyana	24,018	38,984	22,935	29,471	31,601	31,479	12,354
Haiti	16,897	21,778	84,153	34,350	27,866	20,957	17,696
Honduras	35,125	16,007	9,745	7,618	6,439	5,428	3,380
Mexico	7,390	2,967	1,233	1,130	842	499	664
Nicaragua	23,878	6,642	692	925	1,235	1,194	1,163
Panama	1,036	3,667	418	354	844	705	874
Paraguay	6,853	373	27	10	15	11	8
Peru	68,321	87,699	31,545	25,005	31,436	43,139	64,676
Suriname	11,361	9,131	1,771	795	569	729	401
Venezuela	29,736	45,049	45,155	45,824	52,803	78,643	90,708
Region	1,181,095	1,049,416	677,297	495,210	471,828	428,483	373,706

Malaria Morbidity, 2015



7 Datos preliminares para año 2015

Percentage Change in morbidity by country, 2000 – 2015*



*Guayana Fr. - Guyana Francesa

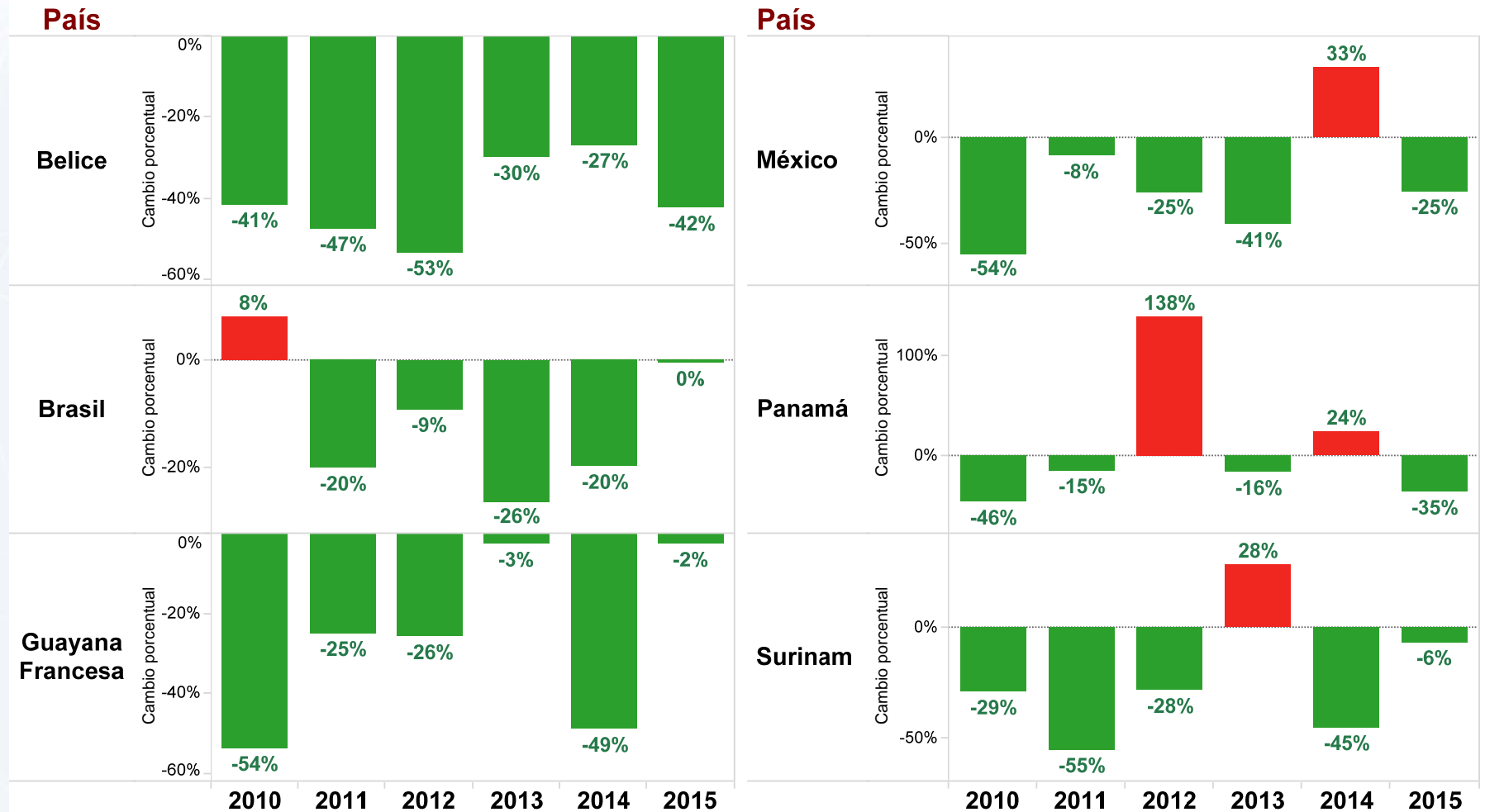
**Rep. Dom. - República Dominicana

Datos del año 2014 usados por Bolivia, Costa Rica, Guyana y Guatemala. Datos

8 Datos preliminares para el año 2015

Decreases in many countries

Cambio porcentual en morbilidad por paludismo en comparación al año anterior, 2010-2015



But, increases in others

Cambio porcentual en morbilidad por paludismo en comparación al año anterior, 2010-2015

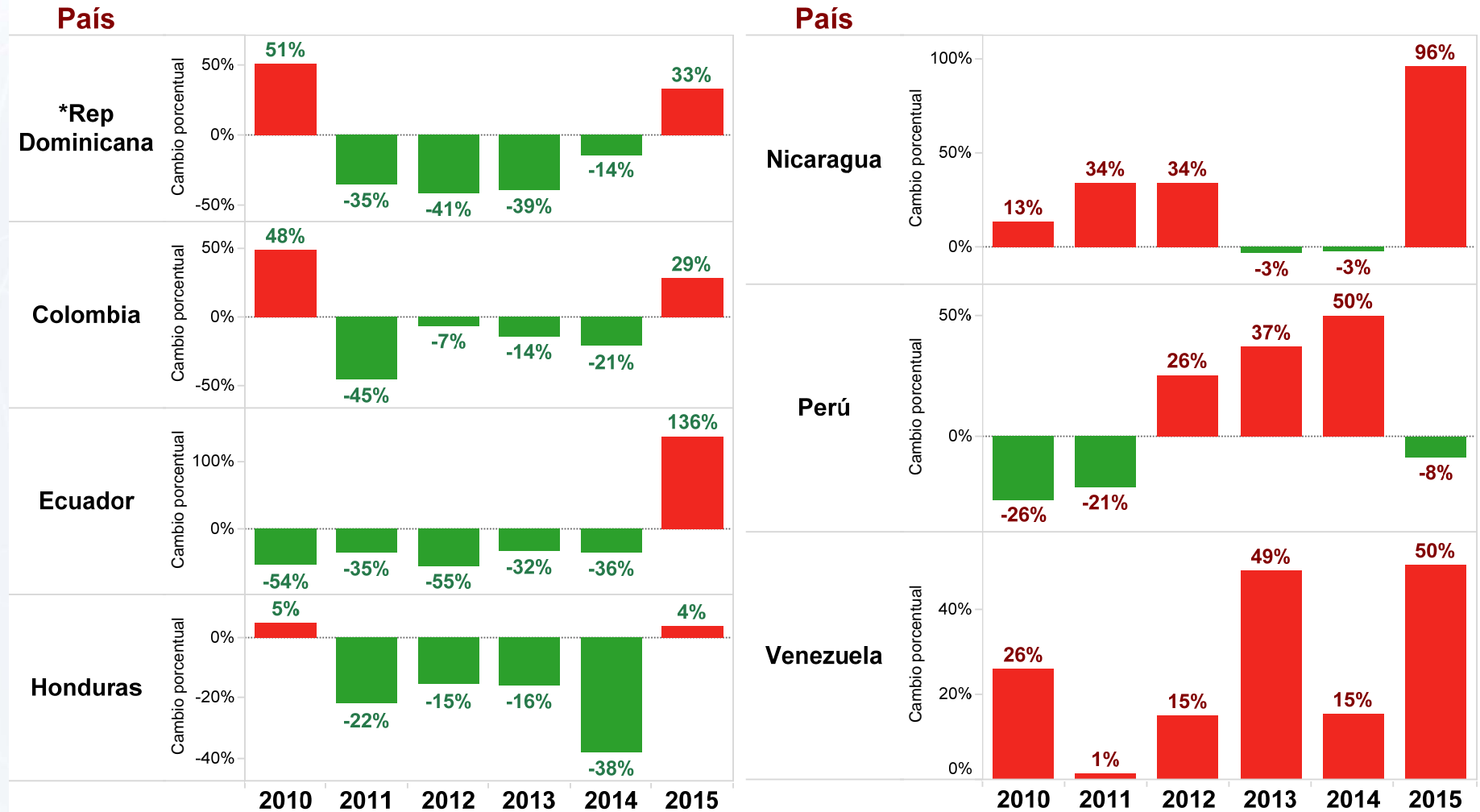
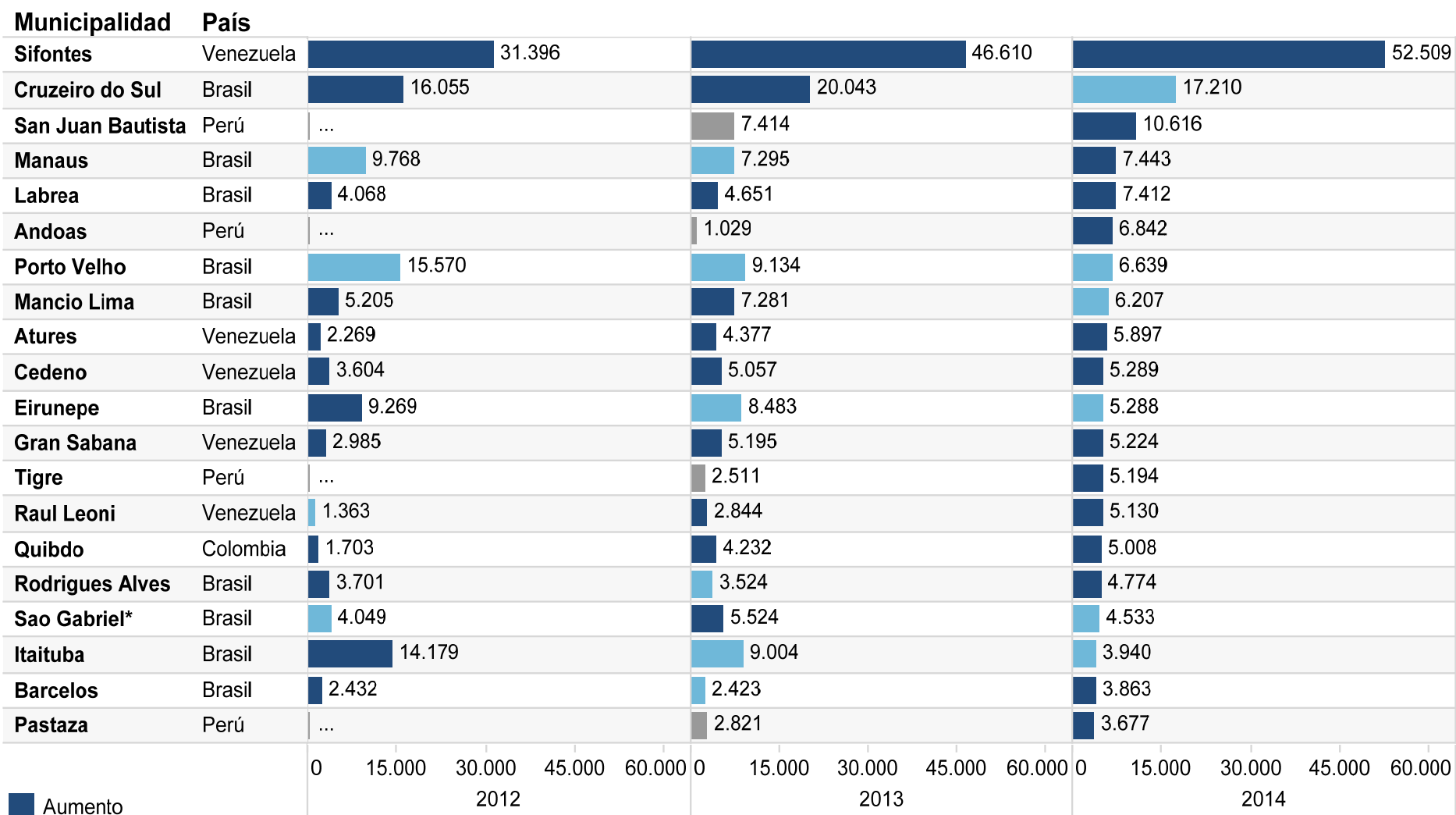


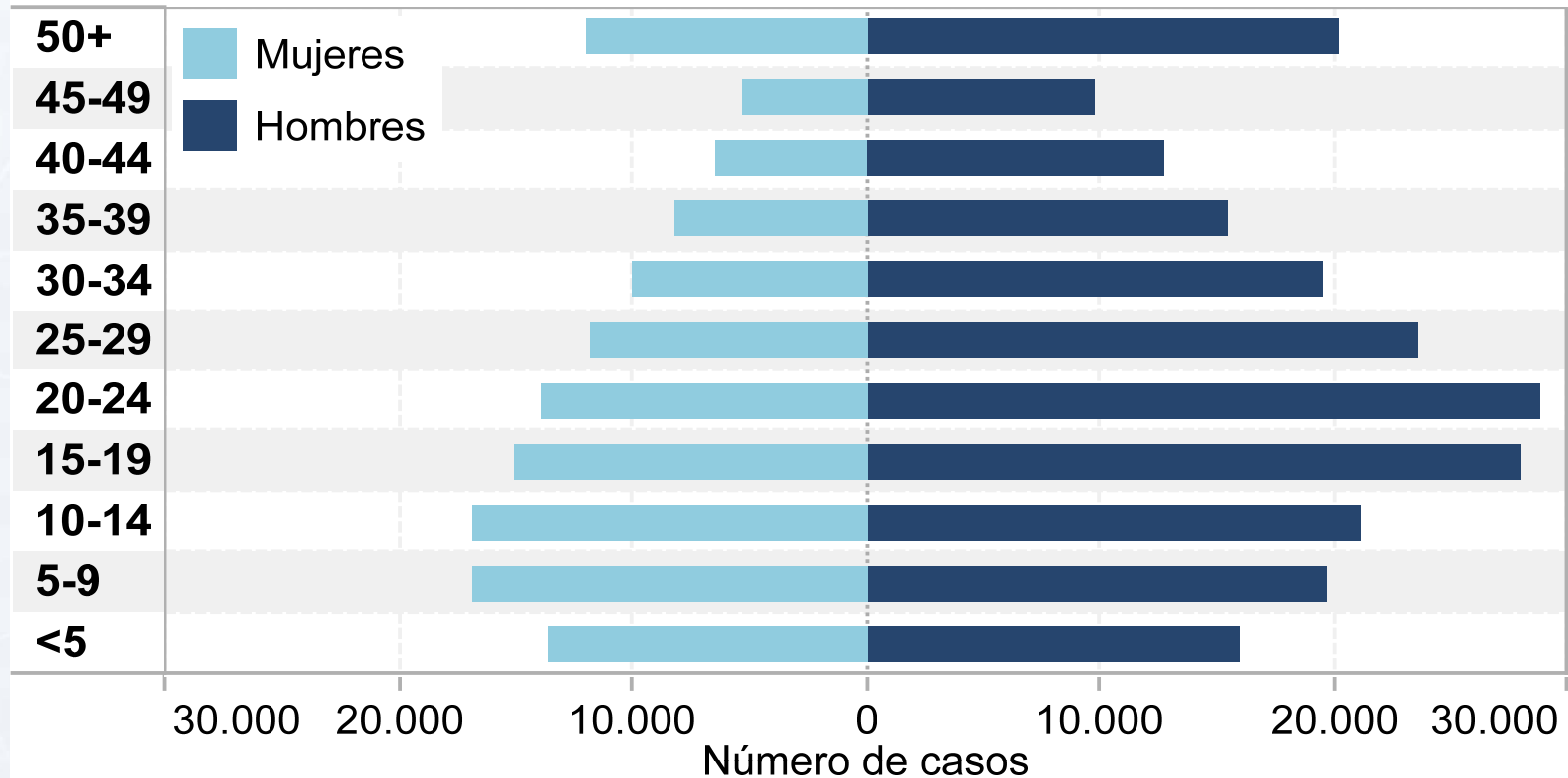
Figura 4. Municipios con el mayor número de casos de paludismo en la Región de las Américas, 2012-2014



"..." indica valores faltantes.
*Sao Gabriel da Cachoeira

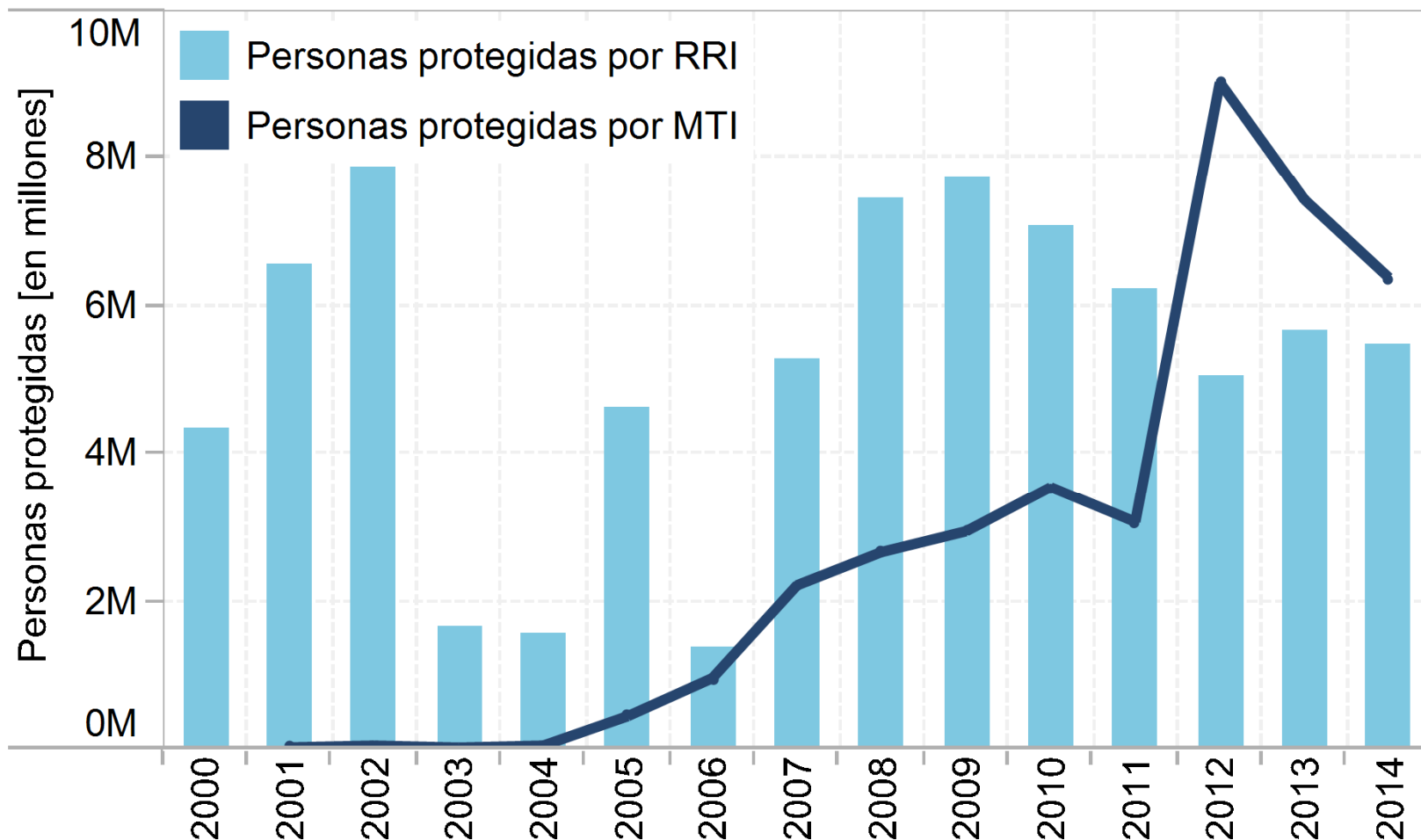
Malaria cases by Age Group and Gender

Casos de paludismo por grupos de edad y género, 2014



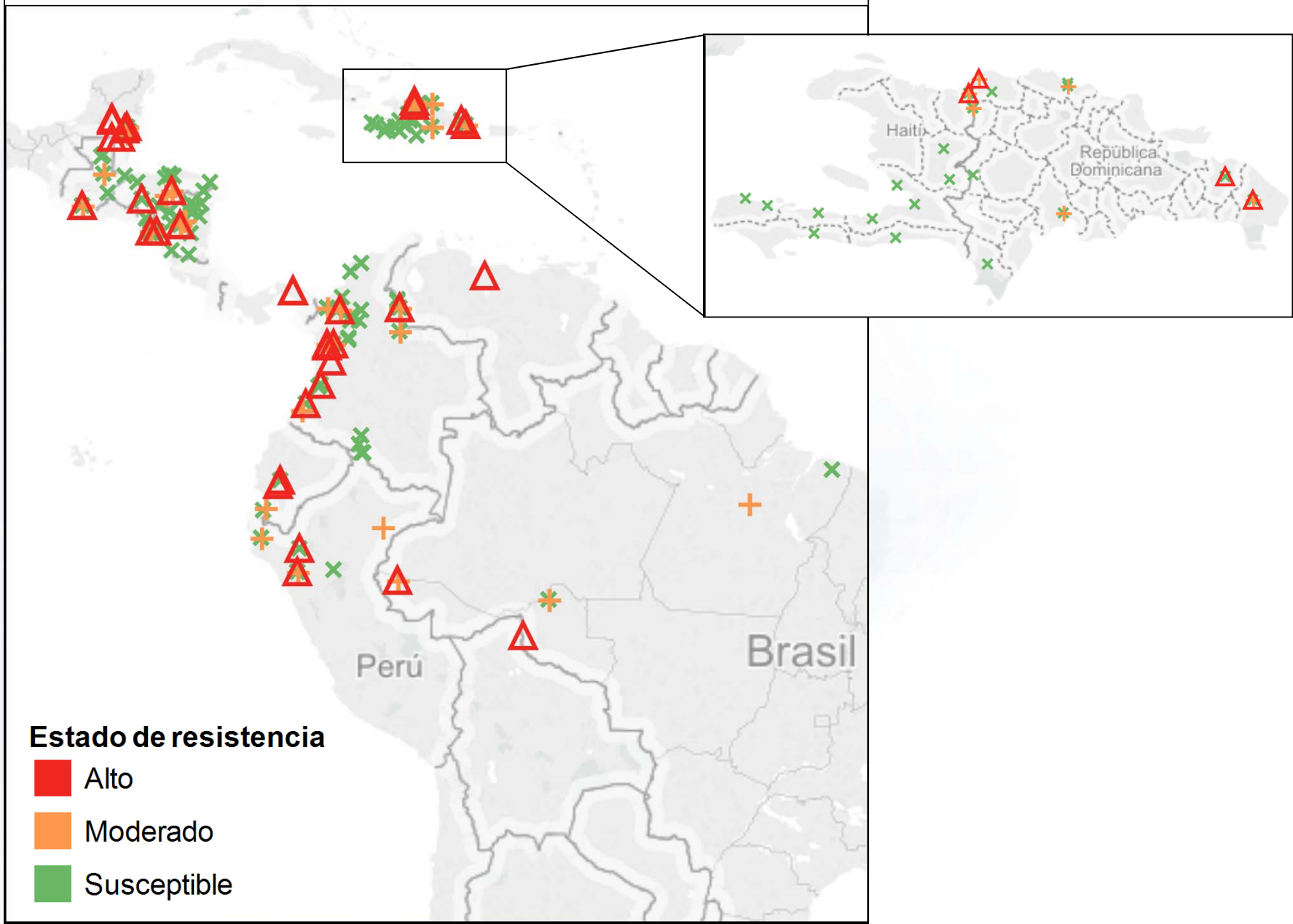
** Información no disponible para Haití. Información de Guatemala disponible según grupos de edad diferentes a los usados aquí.*

Personas protegidas por Rociado Residual Intradomiciliario (RRI) y Mosquiteros Tratados con Insecticidas (MTI), 2000 - 2014

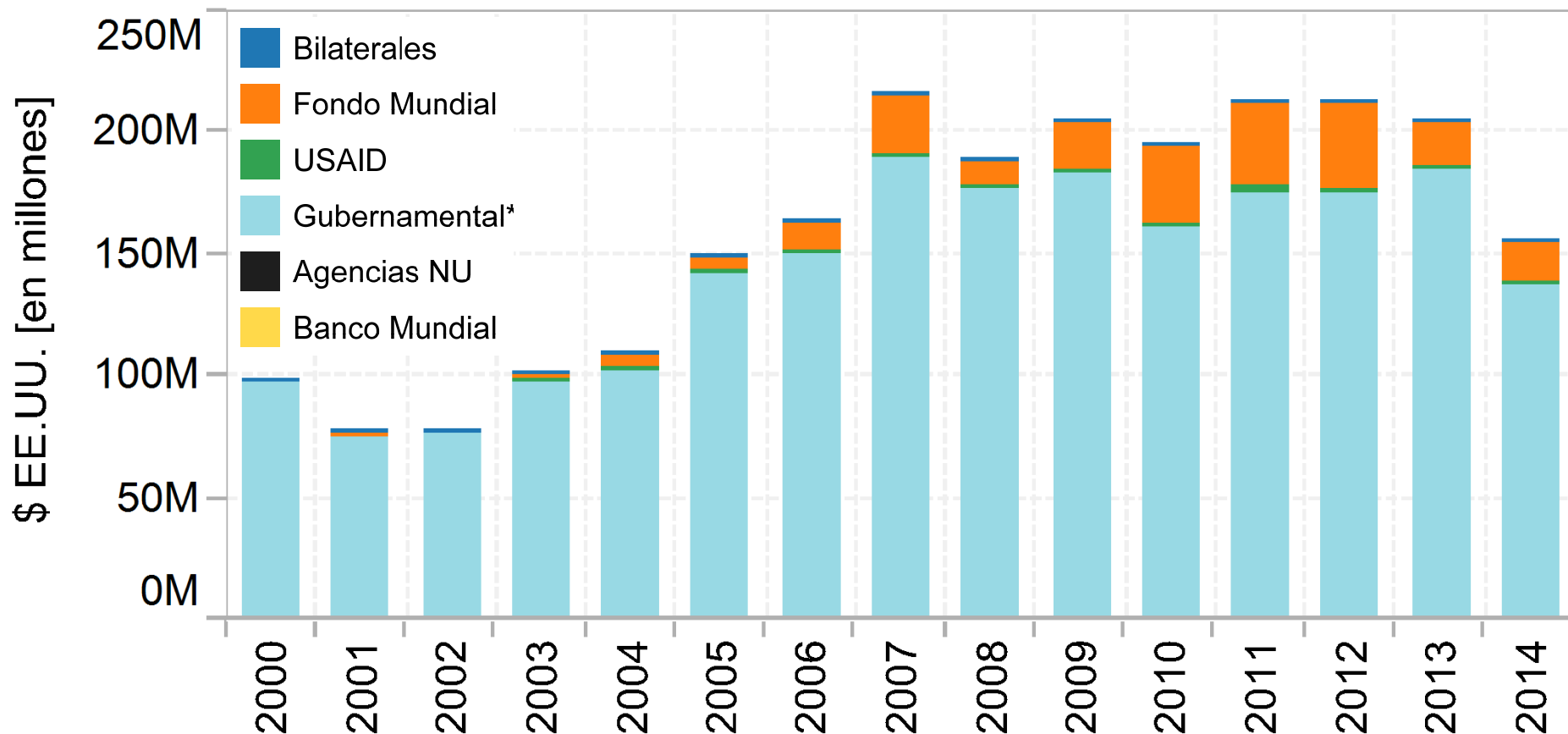


**Datos no disponibles para Belice (2000 y 2003), Brasil (2003-04 y 2006), Colombia (2005), Ecuador (2000 y 2014), El Salvador (2000), Guayana Francesa (2004-06 y 2014), Guatemala (2000-01), Guyana (2000 y 2002-03), Haití (2002-03), Honduras (2000, 2002 y 2005), México (2000, 2003 y 2006), Paraguay (2000), Perú (2000, 2002-06 y 2009-10), Suriname (2003-05) y Venezuela (2000).*

Estado de la sensibilidad a los insecticidas (piretroides) de las especies de *Anopheles* en las Américas



Financiamiento para el paludismo, 2000 - 2014



* Datos no disponibles para Argentina (2000), Belice (2000-03 y 2006), Costa Rica (2014), Ecuador (2000 y 2014), Guatemala (2001-04 y 2009-10), Guyana (2002-03), Haití (2000-12), Nicaragua (2001-06 y 2009), Perú (2009 y 2014), Suriname (2006-11) y Venezuela (2001 y 2006-08). Datos disponibles solamente para el año 2006 para Guayana Francesa.

Initiatives / Networks in the Americas

From 2001 – present

- Amazon Malaria Initiative/
Amazon Network For
Surveillance of Antimalarial Drug
Resistance (AMI/RAVREDA)
- Mesoamerican Initiative:
catalyzed by DDT/GEF project:
BMGF, Carlos Slim Foundation,
Government of Spain (ISGlobal)
- Haiti/Dominican Republic
binational agreement (2009) to
eliminate malaria and lymphatic
filariasis – Carter Center, CDC,
PAHO

More recently

- 2 International Centers of
Excellence on Malaria Research
(ICEMR) – NIH
- Malaria Elimination from
Mesoamerica and Hispaniola
(EMMIE) – Global Fund
- Haiti Malaria Elimination
Consortium (Malaria Zero) –
BMGF
- Mexican Agency for Cooperation and
International Development (AMEXCID)

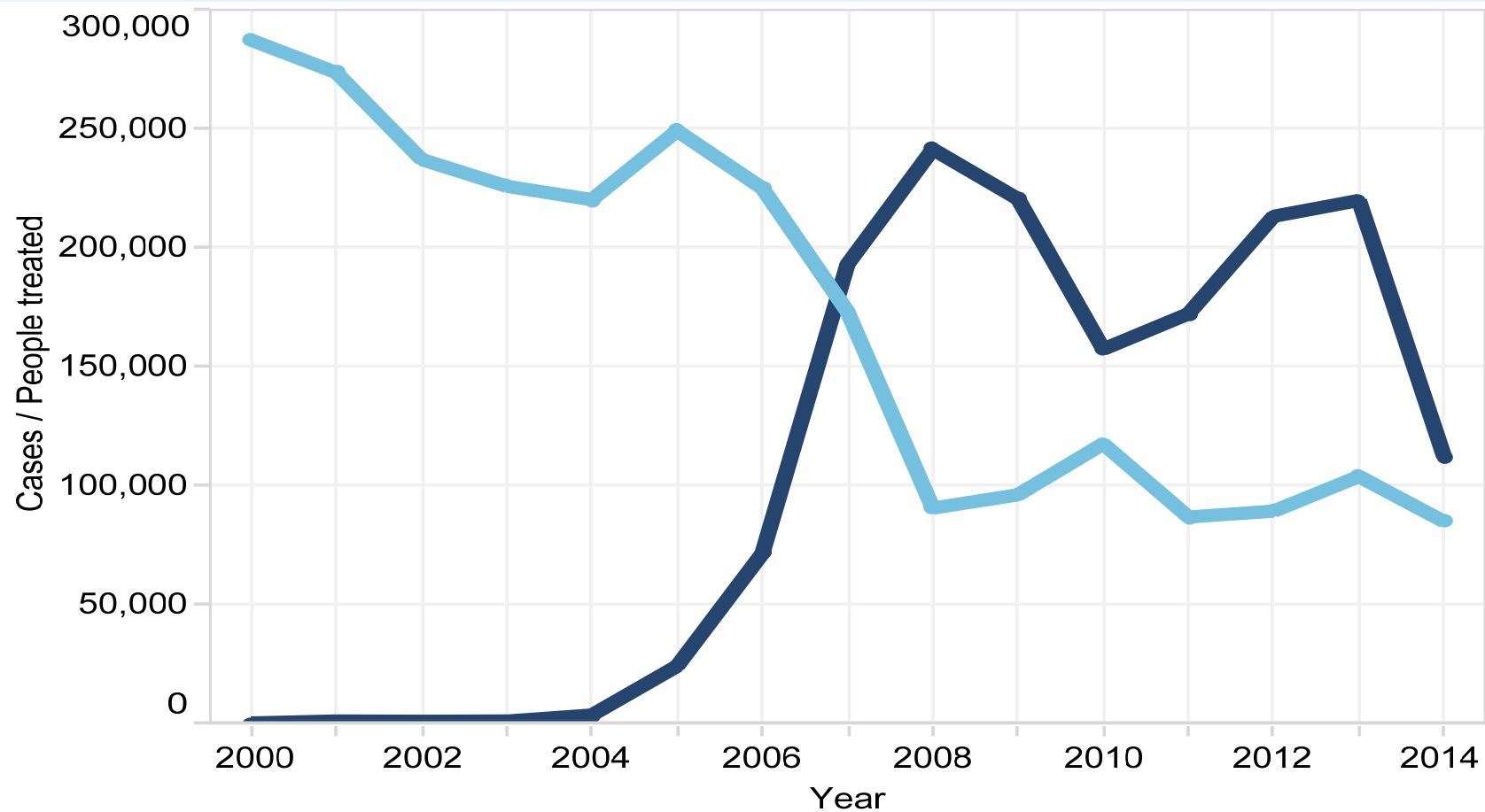


Puntos relevantes (2014)

- Países con mayor numero de casos: **BRASIL y VENEZUELA** (casos en Venezuela mayor número en más de 50 años!)
- **BRASIL**: disminución sostenido (20%); especialmente en Estado de Pará después del brote en 2009.
- **PERU** (65,000 casos) 2,5 veces del numero reportado en 2011
- **GUYANA**: disminución reportado – reducción minería?
- **HAITI**: aumentos cobertura diagnóstica y completitud de información. 50% aumento pruebas diagnosticas y > 90% de informes por las unidades de salud en 2014.
- Movimiento poblacional en Escudo Guyanés – **Brasil, Fr. Guiana, Suriname, Guyana, Venezuela.**
- **Entre otros países en America del Sur, Centroamerica, Hispaniola.**

Casos y Tratados con Artemisinina

P. falciparum malaria*



Indicator

■ P. falciparum & Mixed

■ People treated with ACTs

*Solo Amazonas y Panamá

Countries Preventing Re-establishment of Local Transmission

- Between 2000 and 2013, endemic free Member States detected between 1,800-2,200 imported cases annually.
- Most among travelers - from endemic countries in Americas and other regions.
- Intensive surveillance in Bahamas and Jamaica - outbreaks between 2006 and 2009.
- 406 locally transmitted cases in Jamaica between 2006-2009 - result of imported of *P. falciparum* chloroquine sensitive parasites from Haiti (lack surveillance and response capability – high cost)
- Other non-endemic countries constantly reminded to learn from experience.

Progress to Elimination - 2014

< 10 cases

- Argentina, Costa Rica, El Salvador, Paraguay

< 20 cases

- Belize

< 500 cases:

- Ecuador, Dominican Republic, Suriname, French Guiana

< 1000 cases

- Mexico, Panama

Achievements/Commitments on Elimination

- 2014: Argentina officially requested Director General WHO to initiate malaria elimination certification process; first visit undertaken 2015
- Paraguay with zero cases in over three years, expected to request same soon;
- Costa Rica zero cases; El Salvador <10, and Belize <20 cases; interest among all endemic countries to accelerate efforts towards elimination
- Brazil – launch of plan to eliminate *P. falciparum* (November 10, 2015)

Among challenges on road to Elimination

- **Human Resources:** decentralization of responsibility, not necessarily technical capability (malaria and other vector borne diseases) - inefficiencies in vector management; loss of trained technicians, entomologists, inter alia;
- **Laboratory networks** need to be further strengthened and sustained
- **Areas of difficult access:** ensure Community Health Workers and Volunteers have access - good supply chain management to quality microscopic diagnosis/ RDTs, decision making.
- **Drug quality control :** surveillance/education - community participation - counterfeits
- **Accessibility in Public and Private sectors** - diagnosis and appropriate treatment – poorer and other population groups (e.g. pregnant women, children, miners, plantation workers, indigenous groups, armed / social conflict, border areas)
- **Antimalarial drug resistance** a continuing threat in the Region; Stock outs
- **Optimize potential interprogramme collaboration:** prevention, surveillance (eg. IHR; Dengue, Communication for Behavioral Interventions, Antenatal Control and Expanded Program of Immunization (EPI)

Among Challenges to Malaria Elimination

Capacity building – investigation of malaria cases and deaths, active surveillance, especially in areas of low transmission/elimination areas

Active community ownership and participation - essential in achieving results at all levels (grass-roots, national, regional); eg. Elimination filariasis / onchocerciasis etc. – need prevent loss interest/ ensure active involvement to prevent reintroduction.

Improve regular coordination and knowledge-sharing among all

Improve focus on specific challenges - key populations and hard to manage contexts

Ensure resources available/preparedness to prevent re-establishment where absent

A stylized globe with a grid of latitude and longitude lines. The Americas are prominently displayed in the foreground, with North America on the left and South America on the right. The globe is rendered in a light blue and white color scheme, with a soft glow effect.

Gracias.