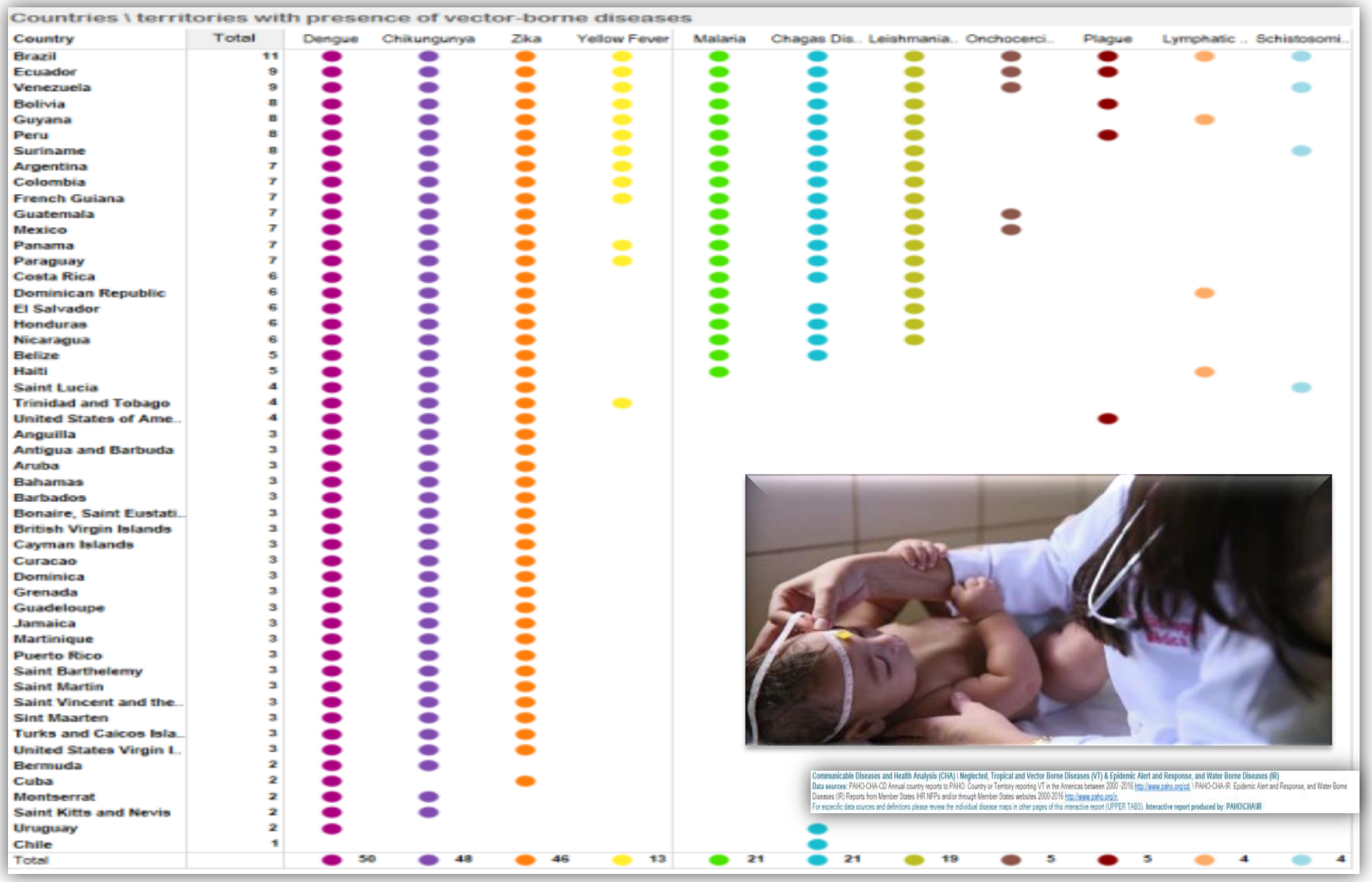
Organización Panamericana de la Salud

Organización Mundial de la Salud
OFICINA REGIONAL PARA LAS Américas

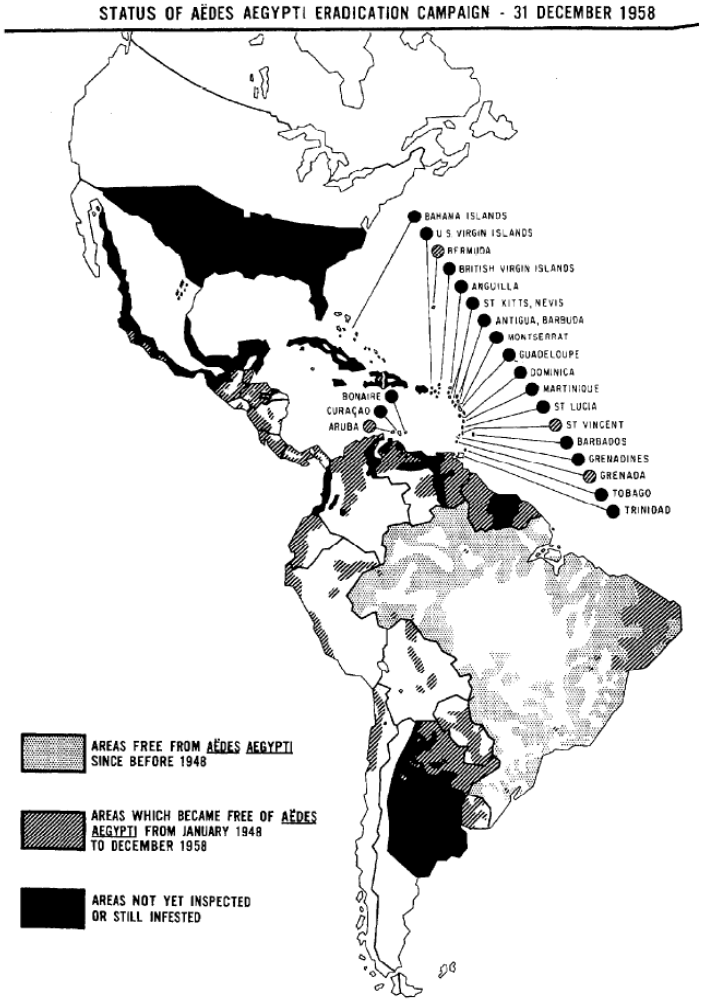
Regional program of public health entomology and vector control: progress and challenges

Haroldo Bezerra
Neglected, Tropical and Vector Borne Diseases Unit
PAHO / WHO – WDC
December 5, 2017

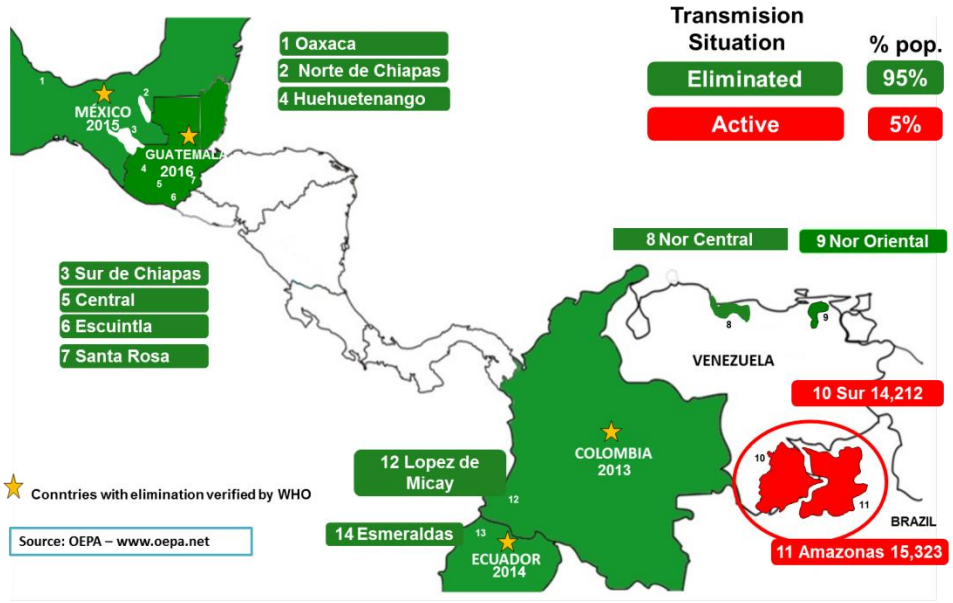
Vectors and Vector-Borne Diseases (VBD)



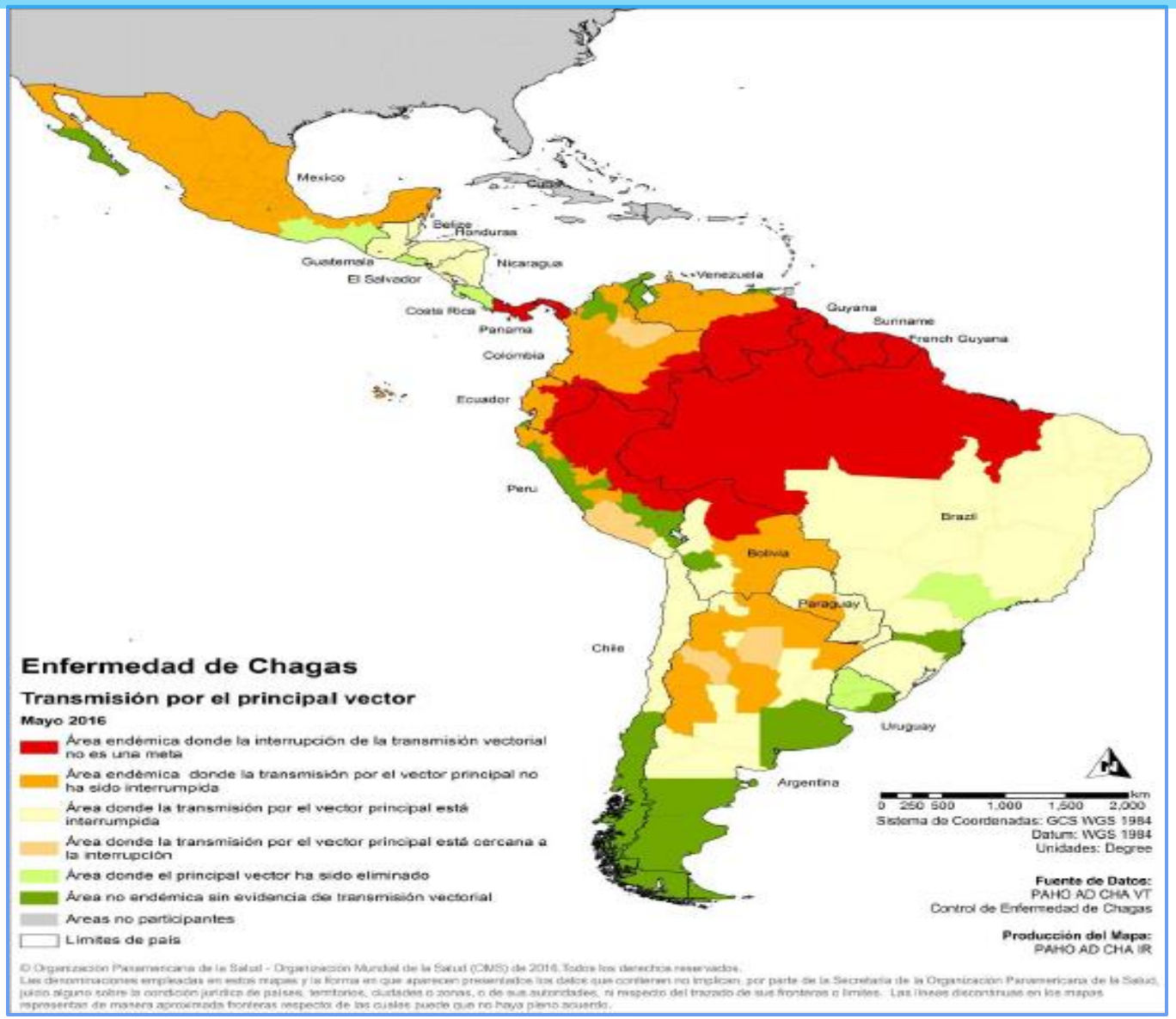
Status of the *Aedes aegypti* Eradication Campaign, December, 1958



Onchocerciasis transmission in the Americas, 2017

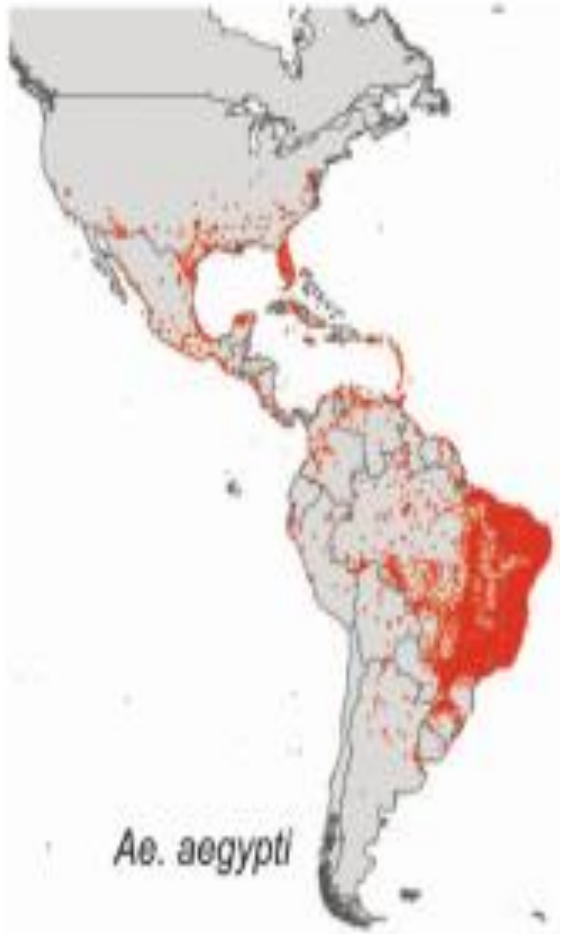


Chagas disease (May 2016)



Source:PAHO/WHO

Aedes aegypti and Aedes albopictus distribution in the Américas



Fuente: The global compendium of *Aedes aegypti* and *Ae. albopictus* occurrence.Moritz, U G Kramer, et. A., 2015

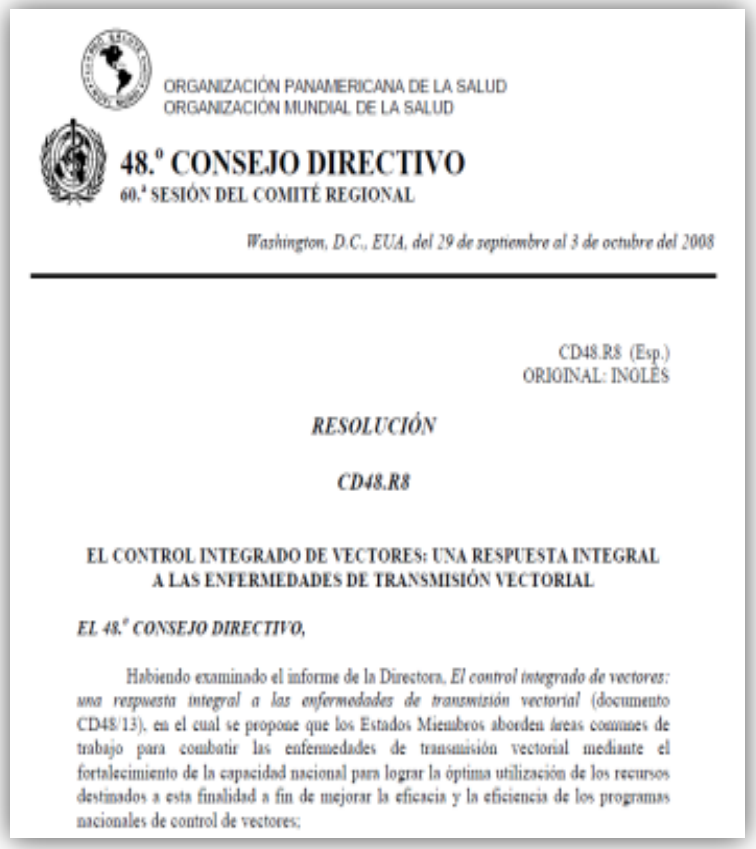
The “traditional vector control approach” in the Americas

- It does not incorporate the environmental, socio-cultural, community participation, communication and mobilization elements.
- Control strategies are predominantly based on the use of chemical pesticides.
- Existing resources are scarce and almost completely invested around “killing the vector”

Organización Panamericana de la Salud
Organización Mundial de la Salud
Oficina Regional para las Américas

Vector Borne Diseases today: what has changed?

- The risk of spreading vector-borne diseases (VBD) **increased**, therefore,
- There is an active effort to strengthen the integrated collection and analysis of the entomological and epidemiological information for decision making and interventions.
- Integrated Vector Management (IVM) is foreseen as the strategic tool to reduce the risk of transmission of VBD.



ORGANIZACIÓN PANAMERICANA DE LA SALUD
ORGANIZACIÓN MUNDIAL DE LA SALUD

48.º CONSEJO DIRECTIVO
60.ª SESIÓN DEL COMITÉ REGIONAL

Washington, D.C., EUA, del 29 de septiembre al 3 de octubre del 2008

CD48.R8 (Esp.)
ORIGINAL: INGLÉS

RESOLUCIÓN

CD48.R8

EL CONTROL INTEGRADO DE VECTORES: UNA RESPUESTA INTEGRAL A LAS ENFERMEDADES DE TRANSMISIÓN VECTORIAL

EL 48.º CONSEJO DIRECTIVO,

Habiendo examinado el informe de la Directora, *El control integrado de vectores: una respuesta integral a las enfermedades de transmisión vectorial* (documento CD48/13), en el cual se propone que los Estados Miembros aborden áreas comunes de trabajo para combatir las enfermedades de transmisión vectorial mediante el fortalecimiento de la capacidad nacional para lograr la óptima utilización de los recursos destinados a esta finalidad a fin de mejorar la eficacia y la eficiencia de los programas nacionales de control de vectores;

CD48.R13 – OPS/OMS

Organización Panamericana de la Salud
Organización Mundial de la Salud
Américas

PAHO Public Health Entomology and Vector Control (PHEVC)

PAHO Technical Advisory Group on Public Health Entomology and Vector Control (TAG-PHEVC)

1st meeting March 2016 – 2nd meeting February 2017

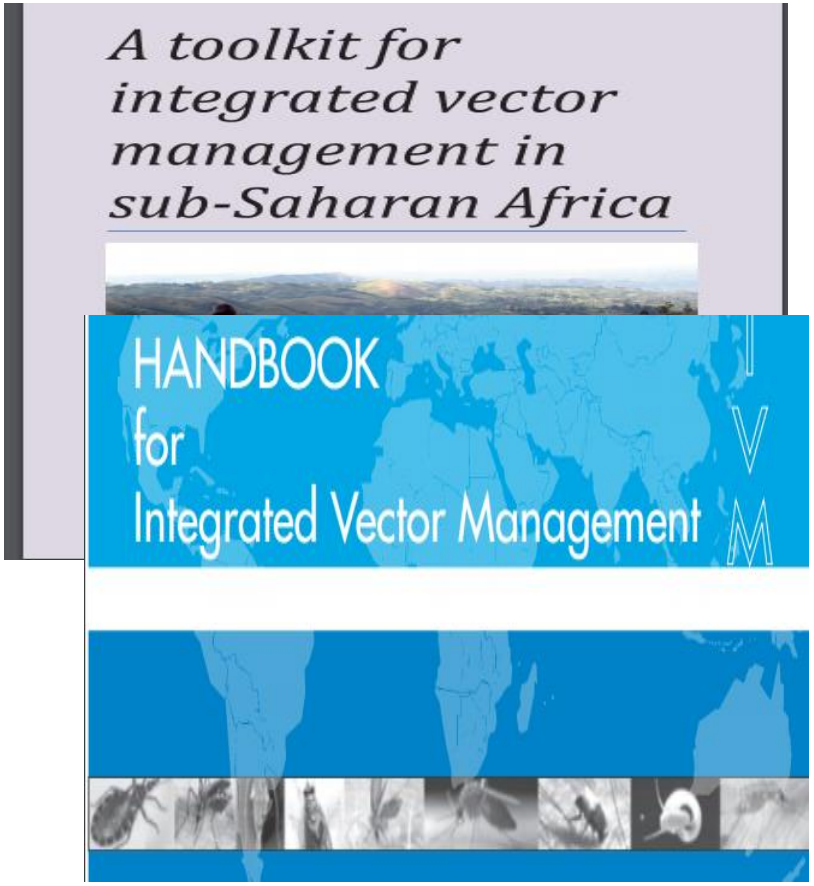
Public Health Entomology and Vector Control Priorities

Strengthen entomological practice	Update, review, & implement IVM	Establish insecticide resistance monitoring & management system

New tools for entomological surveillance and vector control

ONGOING PROGRESS (I)

- **Review, update and adaptation of IVM:**
  - **Development of new operational guidelines adapted for the Americas**
  - **Validation of guidelines contents with specialists and professionals from the countries**



Organización Panamericana de la Salud
Organización Mundial de la Salud
Oficina Regional para las Américas

ONGOING PROGRESS (II)

Trained human resources and the community:

- Trained expert groups updated to provide technical support as required by countries (entomology and vector control).
- Training in the rational use of insecticides and equipment for the application of insecticides
- Mosquito Awareness Week, 2016-2017

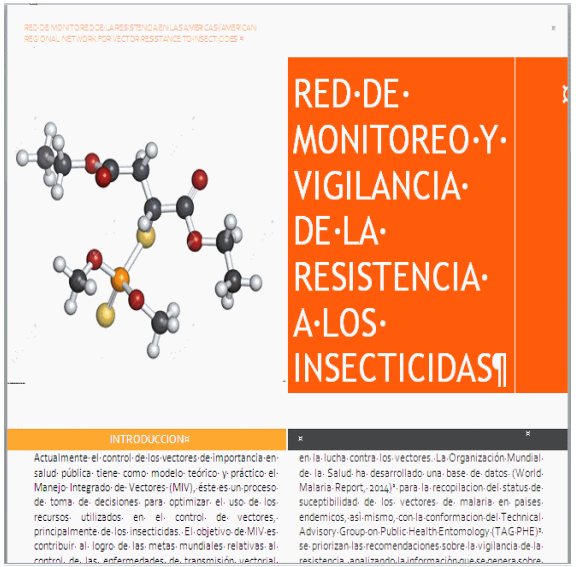
ONGOING PROGRESS (III)

- Establishment of the regional network of monitoring and management of resistance to insecticides.

Participant countries:

Argentina, Belize, Bolivia, Brazil, Colombia, Costa Rica, Cuba, Ecuador, El Salvador, Guatemala, French Guyana, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Dominican Republic, Suriname and Uruguay

- Manual of procedures for the evaluation of resistance to Insecticides used in public health



Organización Panamericana de la Salud
Organización Mundial de la Salud
OFICINA REGIONAL PARA LAS Américas

ONGOING PROGRESS (IV)

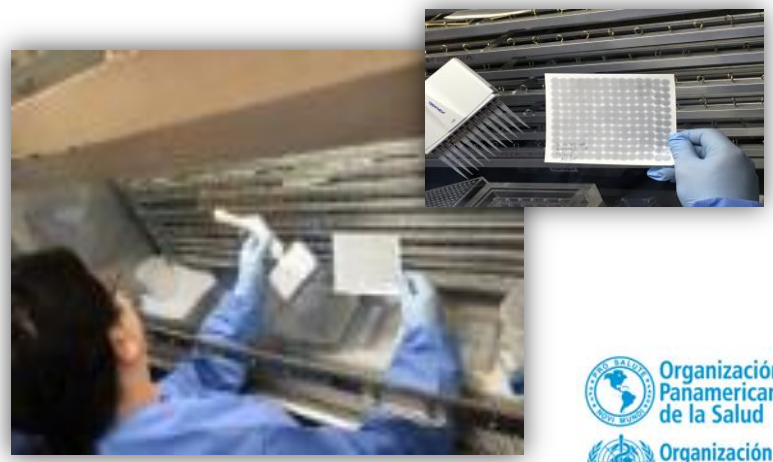
- Implementation of Good Laboratory Practices (GLP) using global standards through reference laboratories in the Americas, including FIOCRUZ (BRA), CIPEIN (ARG), *U. Autónoma de Yucatán* (MEX) and the Regional Center on Public Health Research/National Institute of Public Health of Tapachula, in Chiapas (MEX).

- In progress transfer of technology for the production of insecticide-impregnated papers in CIPEIN and FIOCRUZ. In coordination with WHO and the University of Sains in Malaysia.

GLP accreditation of test sites
(WHO & IVCC)

World Health Organization — IVCC

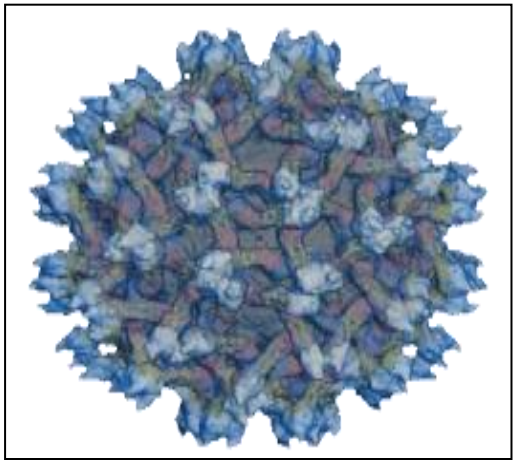
	Region	Site	Current testing capabilities: Products			Phases		
IVCC to lead	West Africa	Institut Pierre Richet, Institut National de Santé Publique, Cote d'Ivoire	LLIN	IRS		1	2	3
		Institut de Recherche en Sciences de la Santé, Centre Muraz, Bukina Faso	LLIN	IRS		1	2	3
		CREC, Cotonou (in collaboration with LSHTM), Benin	LLIN	IRS		1	2	3
		Centre Suisse de Recherches Scientifiques en Cote d'Ivoire, Cote d'Ivoire	LLIN	IRS		1	2	3
	East Africa	Kilimanjaro Christian Medical University College, Moshi, Tanzania	LLIN	IRS		1	2	3
		Ifakara Health Institute, Bagamayo, Tanzania	LLIN	IRS		1	2	3
		National Institute for Medical Research, Muheza, Tanzania	LLIN	IRS		1	2	3
WHO to lead	Western Pacific	Vector Control Research Unit, USM, Penang, Malaysia		SS	Larv		2	3
		Institute for Medical Research, Kuala Lumpur, Malaysia		SS	Larv		2	3
		Centre for Disease Control, Beijing, China		SS	Larv		2	3
		Environmental Health Institute, Singapore						
	South East Asia	WHO CC - National Institute of Malaria Research, Delhi, India	LLIN	IRS	Larv	1	2	3
		WHO CC - Vector Control Research Centre, Puducherry, India	LLIN	IRS	Larv		2	3
	Americas	Oswaldo Cruz Foundation, Fiocruz, Rio de Janeiro, Brazil						
		Centro Regional de Investigación en Salud Pública, Tapachula, Mexico						
		Universidad Autonoma de Yucatan, Merida, Yucatan, Mexico						
		Centro de Investigaciones de Plagas e Insecticidas, Buenos Aires, Argentina						
	European	IRD, Montpellier, France	LLIN	SS	IRS Larv	1		



Organización Panamericana de la Salud
Organización Mundial de la Salud
Oficina Regional para las Américas

ONGOING PROGRESS (VI)

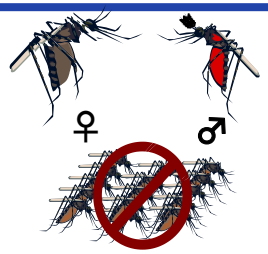
- Establishment of the mosquito virus detection network. Belém, Brazil.



ONGOING PROGRESS (VII)

Creation of the Evaluation Group

- **Strengthen and enhance existing measures of entomological surveillance and vector control** to help reduce the risk of transmission of Zika virus infection and ensure the protection of pregnant women and the population in general.
- **Encourage a robust and accelerated evaluation of new and tools** for *Aedes* control, such as *Wolbachia*-based biocontrol and genetically modified insect technology.



ONGOING PROGRESS (VIII)

Draft: Plan of Action for Public Health Entomology and Vector control

Pan American Health Organization

World Health Organization Americas

159th SESSION OF THE EXECUTIVE COMMITTEE

Washington, D.C., USA, xx xx June 2017

Provisional Agenda Item x.x

CE159/XX
Draft 16 November 2016
Original: English

PLAN OF ACTION FOR PUBLIC HEALTH ENTOMOLOGY AND ENHANCED INTEGRATED VECTOR MANAGEMENT IN THE AMERICAS 2017-2022

Section	Content	Sources of Information
Introduction	The Plan of Action 2017-2022 for Public Health Entomology and Enhanced Integrated Vector Management in the Americas has as its objective to strengthen regional and national actions in control of key vectors and reduce transmission of vector-borne human diseases, in the framework of WHO and PAHO resolutions, strategies, reports and disease-specific plans of action, as well as the Strategic Plan of PAHO 2014-2019 and the 17 UN sustainable development goals 2015-2030. The plan of action is consistent with the structure and recommendations of the joint document on Global Vector Control Response (WHO 2016, v3.1) prepared by a steering committee consisting of the WHO/GMP Malaria Policy Advisory Committee, WHO/NTD Scientific and Technical Advisory Group, TDR Scientific and Technical Advisory Committee, and other stakeholders including Roll Back Malaria Vector Control Working Group. The plan of action focuses on prevention, surveillance and integrated control of the vectors of arboviruses (e.g., Chikungunya, dengue, yellow fever and Zika), malaria, and of the vectors of selected neglected infectious diseases (blinding trachoma, Chagas disease, fascioliasis [drop it?], leishmaniasis, lymphatic filariasis, onchocerciasis and schistosomiasis), through integrated and innovative strategies and using evidence-informed, efficacious and low-cost interventions for vector control. It is hoped this plan of action will be approved by the PAHO Directing Council.	Global Vector Control Response (WHO 2016, v3.1) Global Technical Strategy for Malaria 2016-2030 (WHO 2015) Strategy for Arboviral Disease Prevention and Control, CD55/16, PAHO 2016 Integrated Strategy for Dengue Prevention and Control in the Region of the Americas (EGI-dengue) (PAHO 2015) Strategic Plan of PAHO 2014-2019 UN sustainable development goals 2015-2030

THANK YOU AND ACKNOWLEDGEMEN TO PARTNERS AND COUNTRIES OF THE AMERICAS

Ministries of Health of the Region

NAVY ENTOMOLOGY CENTER OF EXCELLENCE (NECE)

Pan American Health Organization

World Health Organization

REGIONAL OFFICE FOR THE Americas