

Briefing Deck

Global Disease Detection in Central & South America: Issues in Biosafety & Biosecurity

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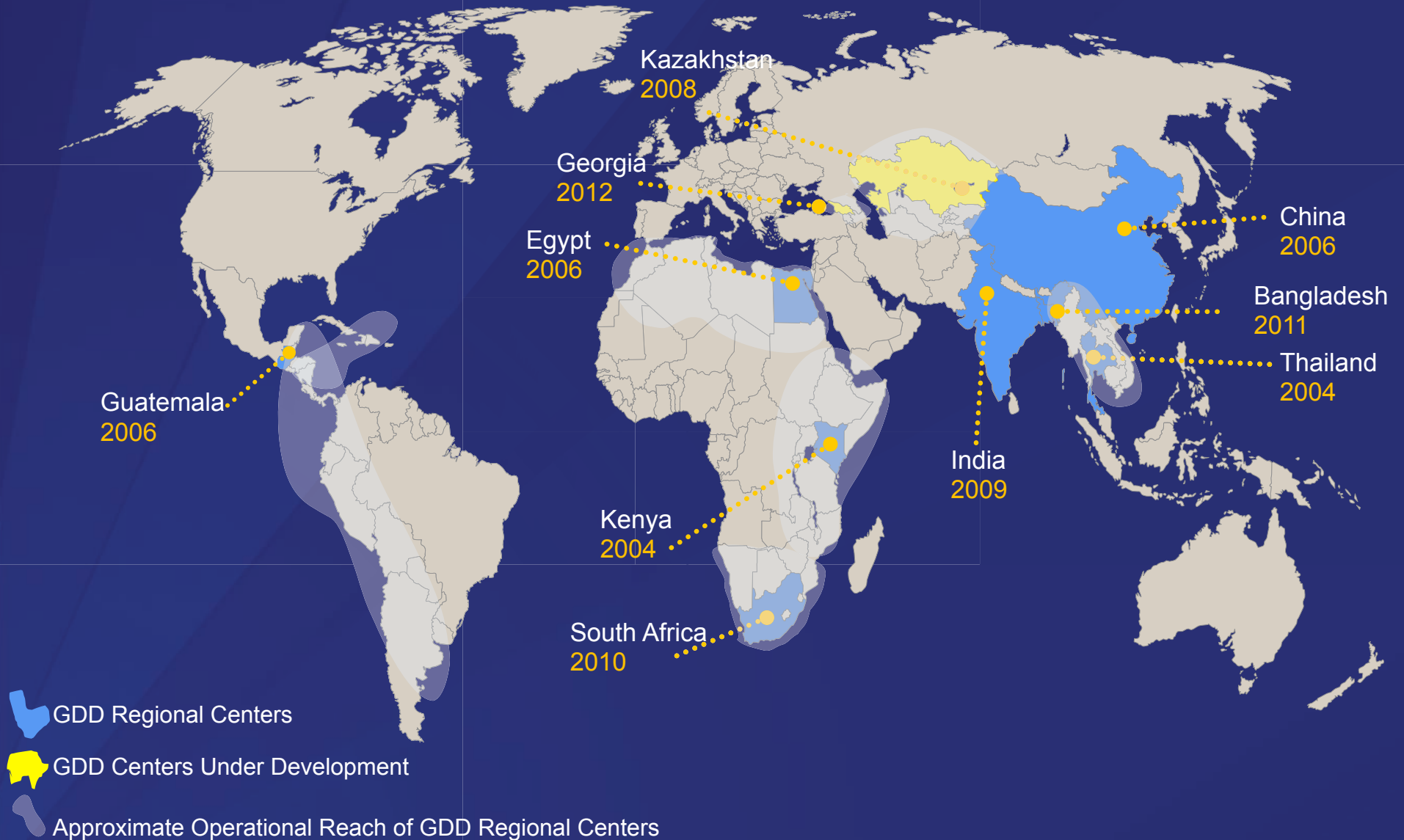


**WHAT THE HECK IS A GDD
CENTER?!?**

Division of Global Health Protection

- **Mission:** Ensure global health security by detecting and responding to infectious diseases and other public health emergencies
- **Mission: Detect, Prevent, Respond!** •

Global Disease Detection Regional Centers



CDC in Central America

- Regional office located in Guatemala
- Provides technical assistance to 8 countries in the region through various programs
 - Central América & the Dominican Republic (and more countries beyond these)
- Collaborative activities began in 1976 in Guatemala

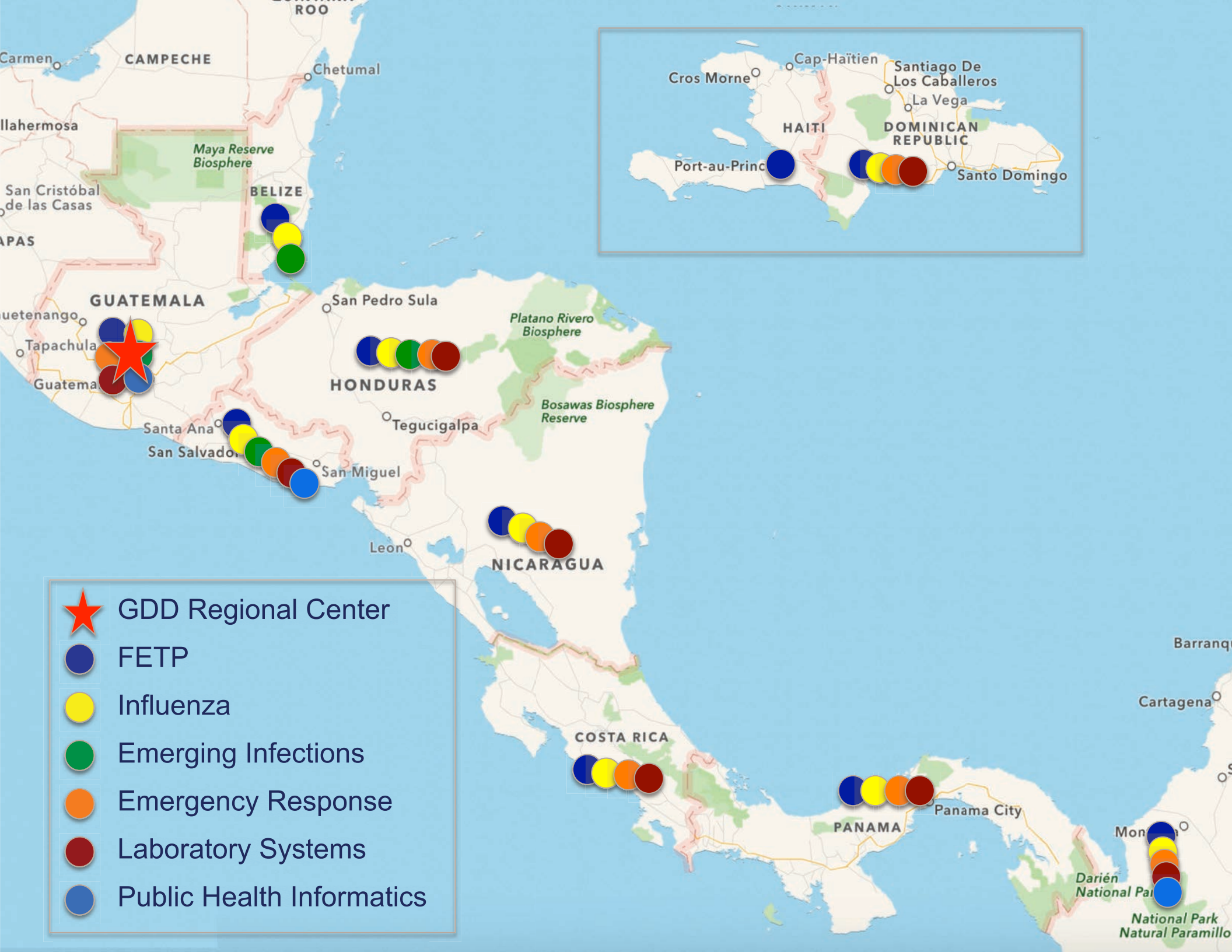


CDC in Central America

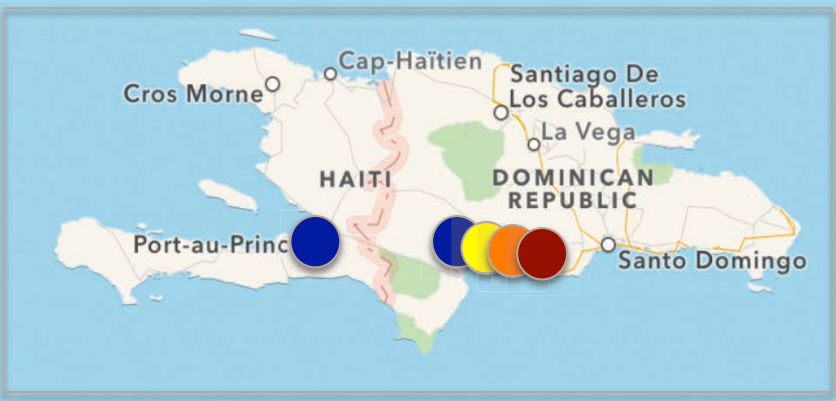


Overview of GDD-Guatemala

- Only GDD Center in the Americas
- Responsible for IHR & public health capacity development in 8 countries of Central America (and beyond)
- Key activities – FETP, IEIP, Laboratory, Emergency Response, Influenza
- 6 direct hires, 4 LES staff under the GDD “umbrella”



-  GDD Regional Center
-  FETP
-  Influenza
-  Emerging Infections
-  Emergency Response
-  Laboratory Systems
-  Public Health Informatics



Other Countries...

Our outreach and mentoring includes:

- Argentina – Flu, Lab Systems
- Bolivia – Lab Systems
- Chile – Lab Systems, EPT
- Colombia – Flu, FETP, Lab, EPT, Outbreak response
- Ecuador – Outbreak response
- Paraguay – Flu
- Peru – Flu, Lab, Outbreak response
- *Requests for assistance from Venezuela, Brazil, as well as CARPHA, Mexico*

Since 2006 the GDD Regional Center has:

- Responded to over 290 outbreaks in 12 countries
- Identified 9 new pathogens in the region
- Established 52 tests for pathogens, most using advanced molecular diagnostics for speed, safety and reduce costs
- Established 2009 H1N1 influenza tests throughout Central America – a scalable molecular diagnostic platform
- Graduated over 90 global health leaders – over 92% are in leadership roles in the region
- Trained over 20,000 public health officials from 14 countries in short courses and workshops
- Established emergency response plans in 9 countries

Lab Support & Outbreaks

- Since 2010, CDC has provided laboratory support in 194 outbreaks in Central & South America & the Caribbean
- 12 different countries
- 24 outbreaks were PHEICs

Public Health Impact

- Lab identified or confirmed the pathogen in 87% (168/194) of outbreaks
- Lab+Epi investigation identified risk factors in 68% (132/194) of outbreaks
- Public health measures implemented based on CDC recommendations in 73% (141/194) of outbreaks

**REGIONAL OBSERVATIONS ON
BIOSAFETY & BIOSECURITY
– A FIELD PERSPECTIVE**

Issues & Problems

- Lack of regulations & policies based on fact
- Facility problems – ancient or design issues
- Lack of inspections
- Lack of knowledge sharing
- Limited training – PPE, BSCs, practices
- Limited supplies – PPE, molecular reagents
- Poor waste management
- Poor infectious materials shipping/transport
- Poor archival storage of specimens

IHR Milestones (Or Why GHSA?)

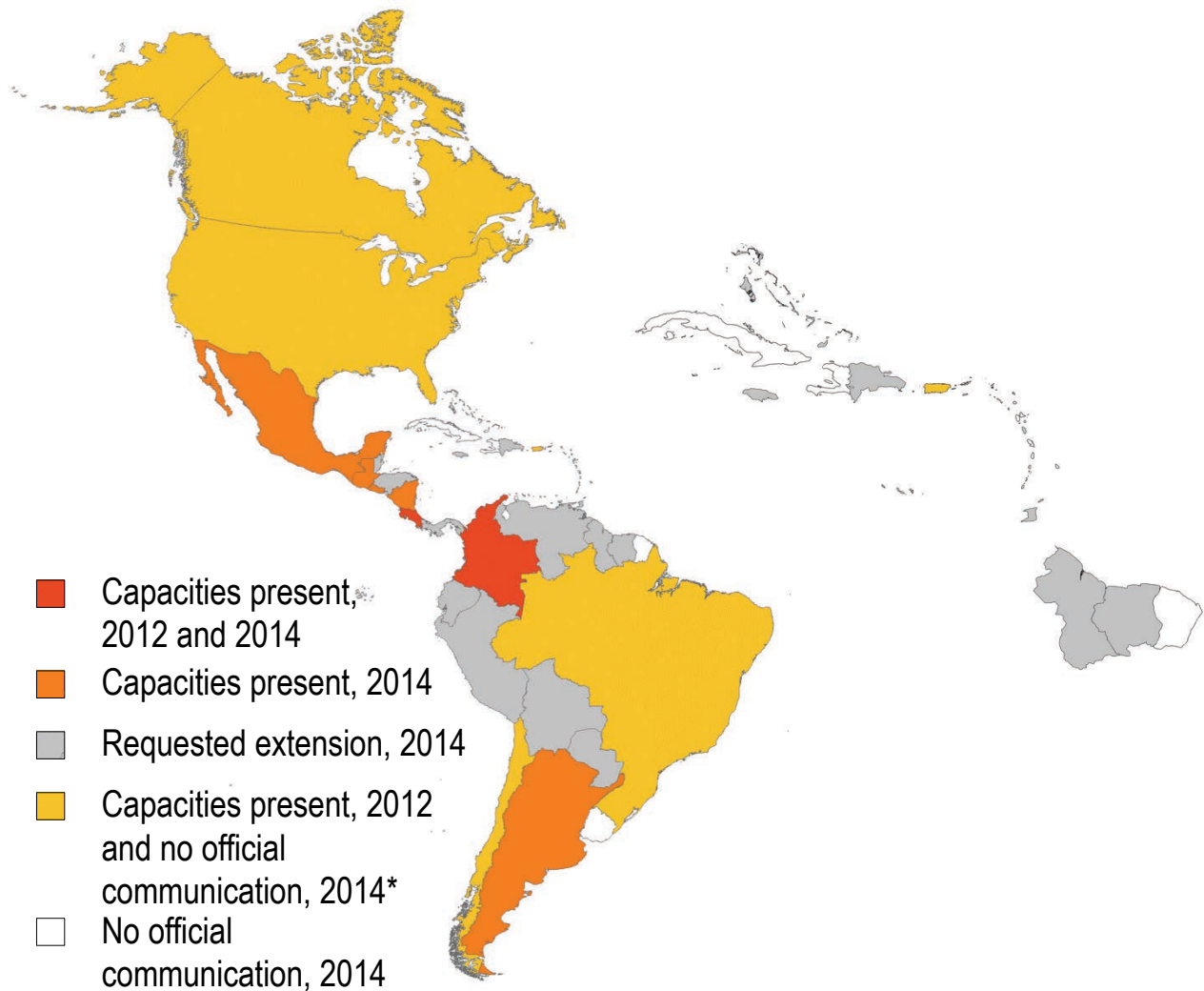
- 2005: New IHR completed
- 2007: IHR 2005 becomes international law
- 2009: Pandemic influenza
- 2012: First round of compliance declarations, first extensions granted
- 2014: Second round of compliance declarations, second (and final extensions) granted
- 2015: Ebola in West Africa
- 2016: All nations IHR compliant?**

IHR Status: 2012



- Official communication: 35/35 States Parties
- Requested and granted extension: 29/35 States Parties
- Self-determination core capacities present: 6/35 States Parties

IHR Status: 2014



* As of 14 April 2014

- Official communication: 25/35 Nations
- Requested extension: 18/25 Nations
- Self-determination core capacities present: 7/25 Nations

IHR Compliant States

– Country –	– Year –
• Argentina	2014
• Brazil	2012
• Canada	2012
• Chile	2012
• Colombia	2012
• Costa Rica	2012
• Cuba	2014
• El Salvador	2014
• Guatemala	2014
• Mexico	2014
• Nicaragua	2014
• Saint Lucia	2014
• USA	2012
• Uruguay	2014

Total: 14/32 (43%)

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• Brazil	2012
• Canada	2012
• Chile	2012
• Colombia	2012
• Costa Rica	2012
• Cuba	2014
• El Salvador?	2014
• Guatemala?	2014
• Mexico	2014
• Nicaragua?	2014
• Saint Lucia	2014
• USA	2012
• Uruguay	2014

Total: 14/32

Health Security Threats of Regional Concern

1. Emergence of new pathogens
2. Globalization of travel & food
3. Drug-resistant pathogens
4. Biological accidents
5. Biological terrorism

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MEXICO

Gulf of Mexico

*North
Atlantic
Ocean*

BAHAMAS

CUBA

JAMAICA

Caribbean Sea

GUATEMALA

BELIZE

HONDURAS

EL SALVADOR

NICARGUA

COSTA RICA

PANAMA

VENEZUELA

GUYANA

SURINAME

FRENCH GUIANA
(FR)

COLOMBIA

ECUADOR

PERU

BRAZIL

BOLIVA

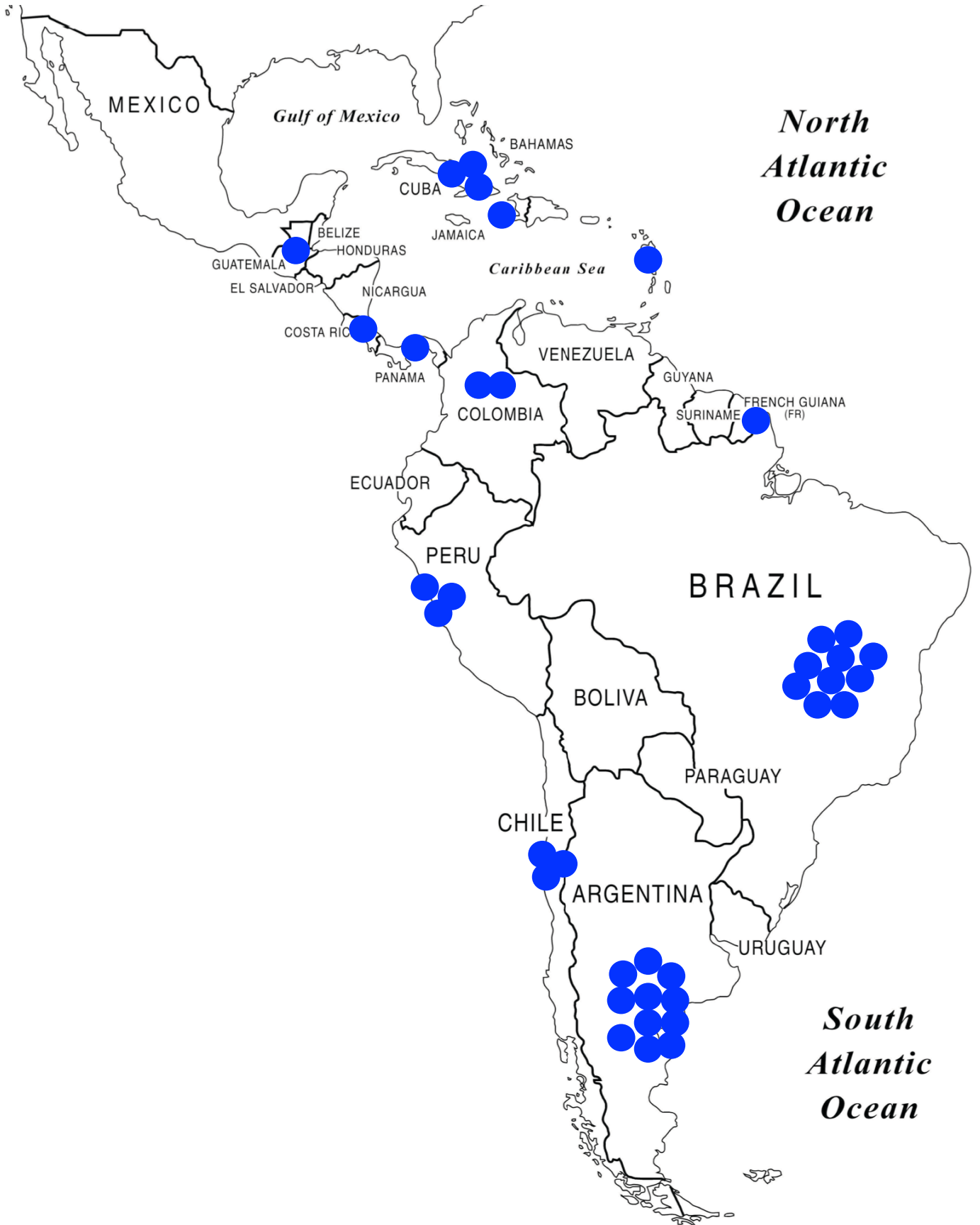
PARAGUAY

CHILE

ARGENTINA

URUGUAY

*South
Atlantic
Ocean*



MEXICO

Gulf of Mexico

*North
Atlantic
Ocean*

Caribbean Sea

BRAZIL

*South
Atlantic
Ocean*

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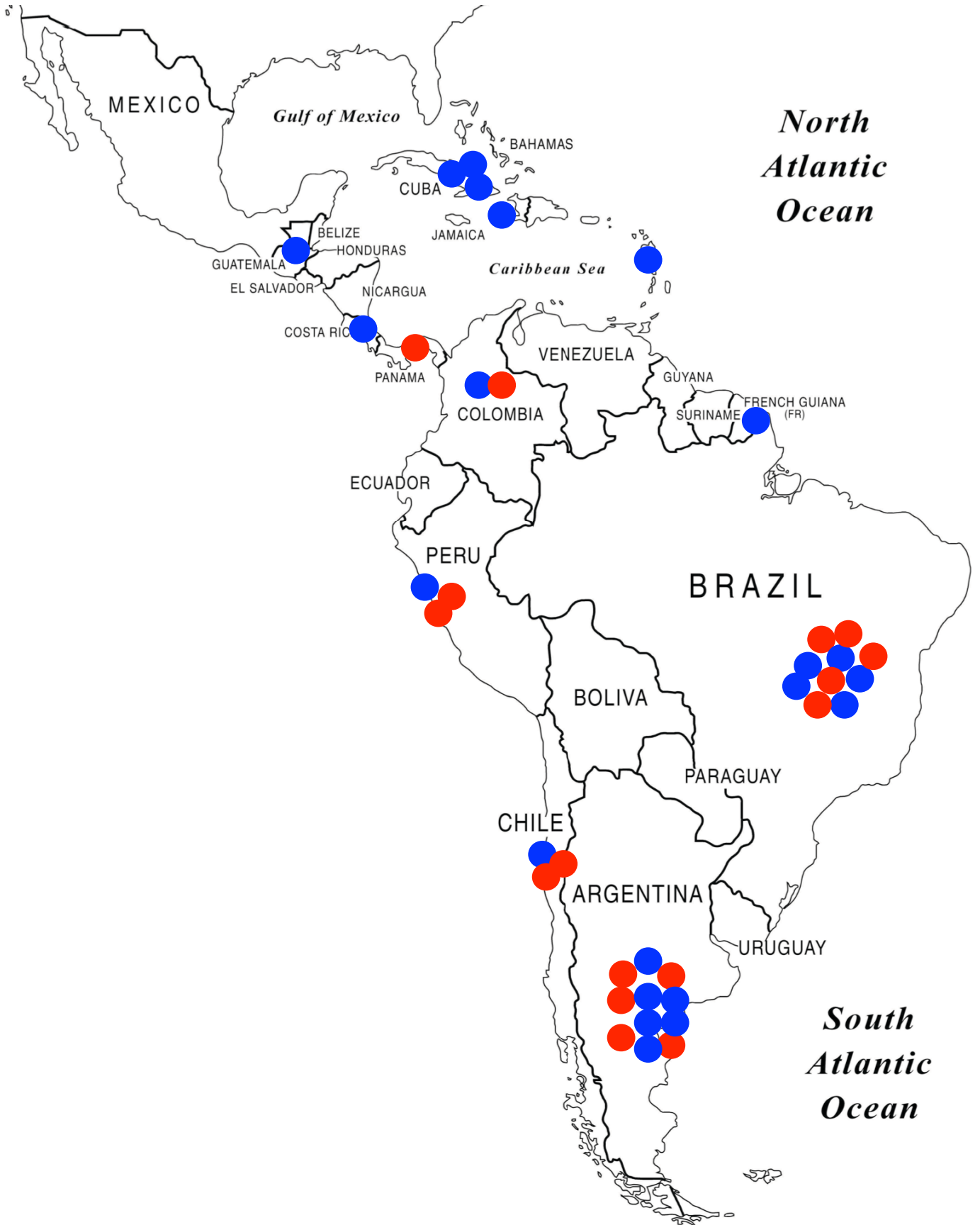
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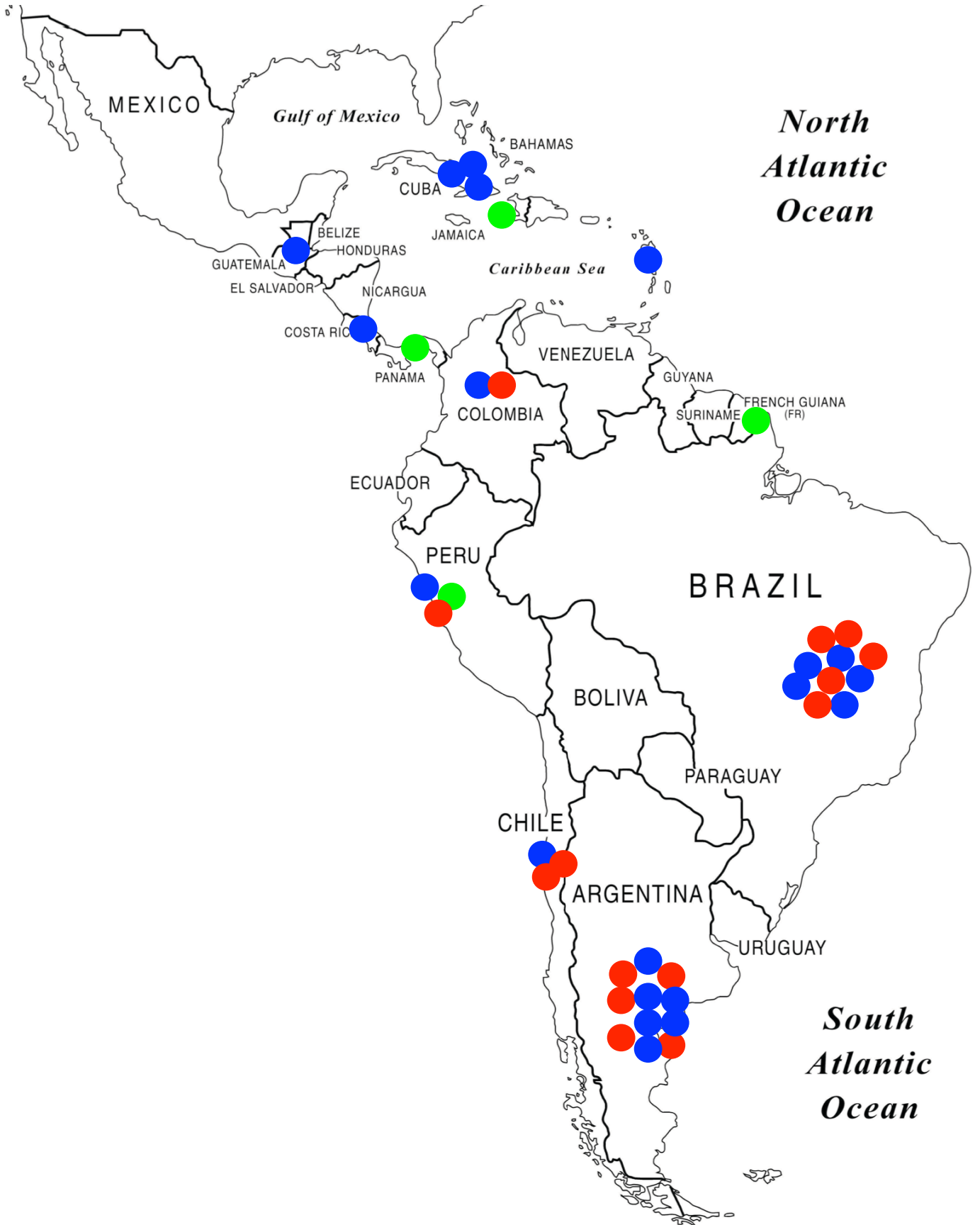
PARAGUAY

CHILE

ARGENTINA

URUGUAY





*North
Atlantic
Ocean*

*South
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What we are doing

- Laboratory development & design (Panama)
- “Twinning”/Mentoring (Guatemala + Colombia)
- Bottom up & Top down (SLMTA, NPFI)
- Assessments (DGHT, Flu, Ebola, GDD)
- Networks (PulseNet LAC)

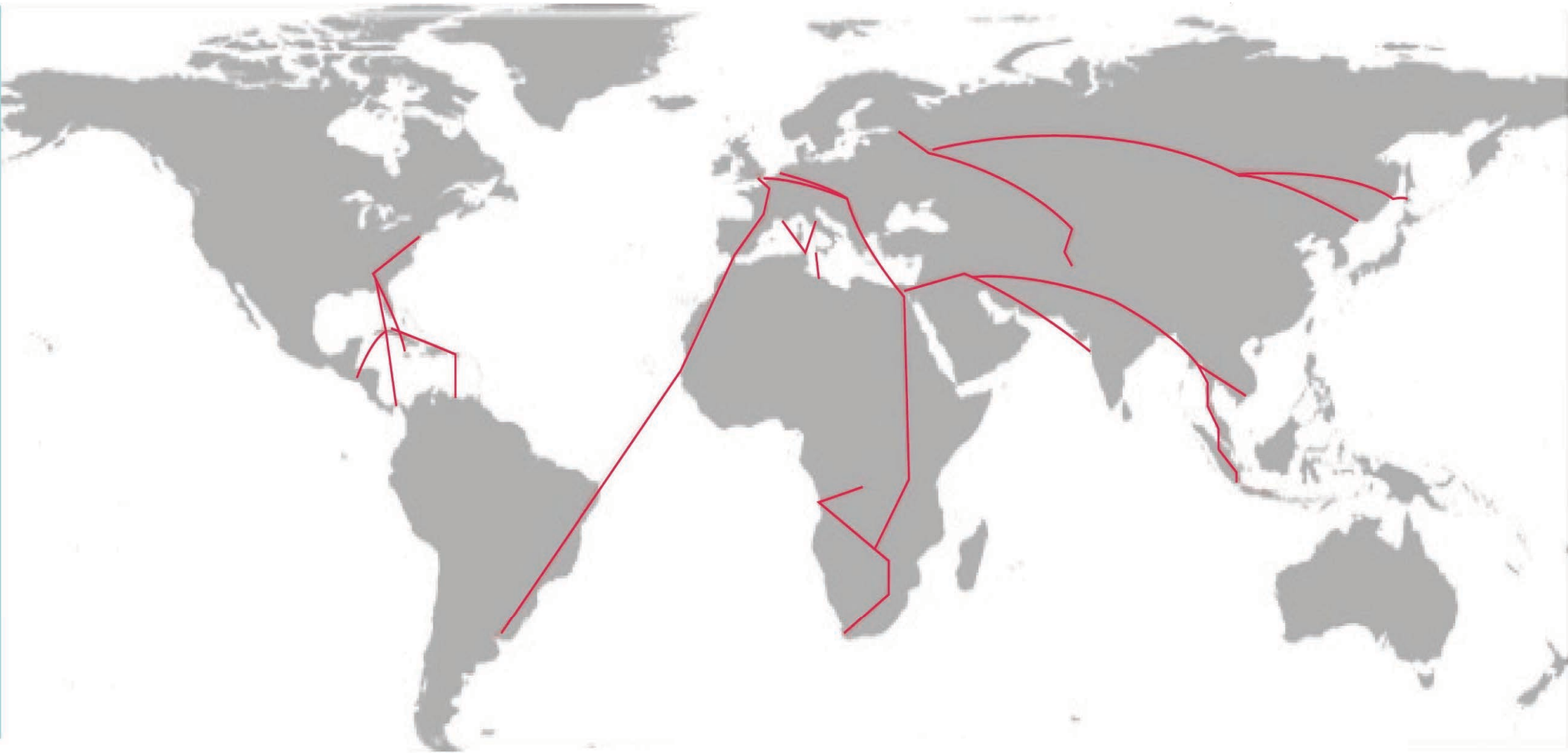
Road Map (FY2016)*

- **Oct 2015:** Start of expanded laboratory assessments in selected countries
- **Dec 2015:** Draft assessments and recommendations circulated
- **Jan 2016:** Final assessment reports issued
- **Spring 2016:** Laboratory design workshop – Laboratory biosafety conference
- **Summer/Fall 2016:** Pilot workshop on laboratory biosafety program (Guatemala, El Salvador, Panama, Colombia)

** Subject to funding*

**AND WHY SHOULD WE CARE
ABOUT THE AMERICAS?...**





1935



2015

Region	Arrivals	2015 Share	% Change from 2014
Western Europe	2,255,997	32	-3.8
Eastern Europe	182,971	2.6	-13.7
Asia	2,260,232	32	6.3
Middle East	271,461	3.8	14.5
Africa	91,532	1.3	11.2
Oceania	272,456	3.9	-1.7
South America	1,285,942	18.2	5
Central America	199,167	2.8	12.4
Caribbean	240,100	3.4	16.4
Total	7,059,858	100	2.5



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The findings and conclusions are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

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