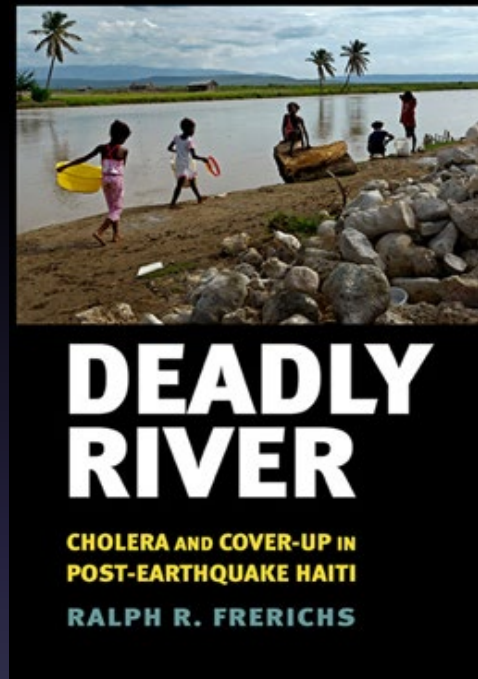


Truth, Lies and the Greater Good

Cholera's Unexpected Arrival in Haiti



Ralph R. Frerichs
Professor Emeritus, Epidemiology
UCLA Fielding School of Public Health
Los Angeles, CA, USA

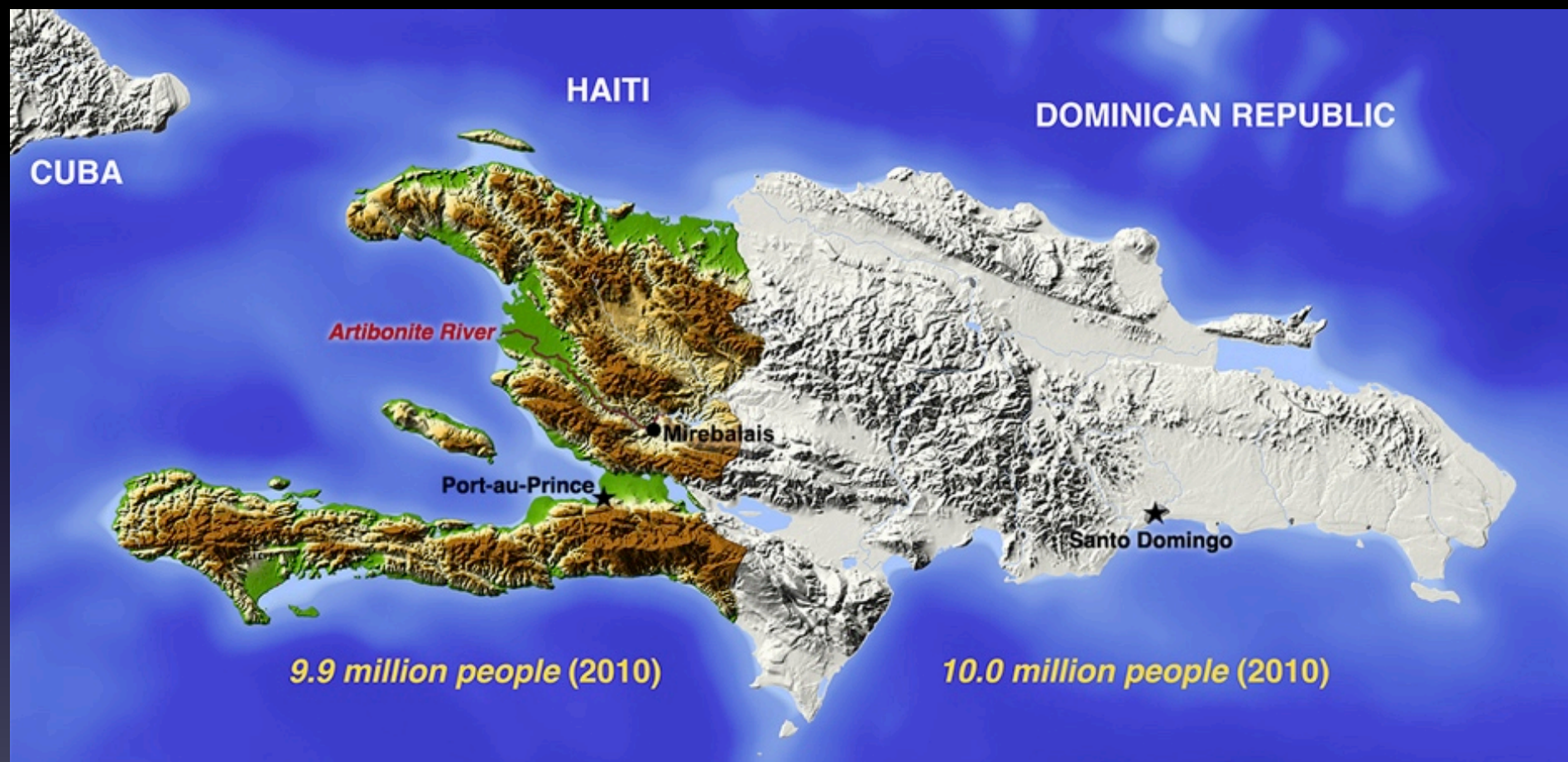
“The Greater Good”

The Boston Globe's "Spotlight" team of investigative journalist reported widespread child sex abuse by Roman Catholic priests in the Boston area.

Jerry Sandusky, assistant football coach at Penn State University under legendary Joe Paterno, who was convicted of rape and child sexual abuse.

HBO series about the Chernobyl disaster in 1986 when a nuclear power plant in Ukraine, Soviet Union, exploded unexpectedly during a safety test, contributing to 4,000 to 93,000 radiation-related deaths.





Earthquake, January 2010



Image 1: when cholera came to Haiti



A child is examined at the Doctors Without Borders temporary hospital in Port-au-Prince on Nov. 16. Symptoms of cholera include severe diarrhea, vomiting and fever.

Image 2: when cholera came to Haiti



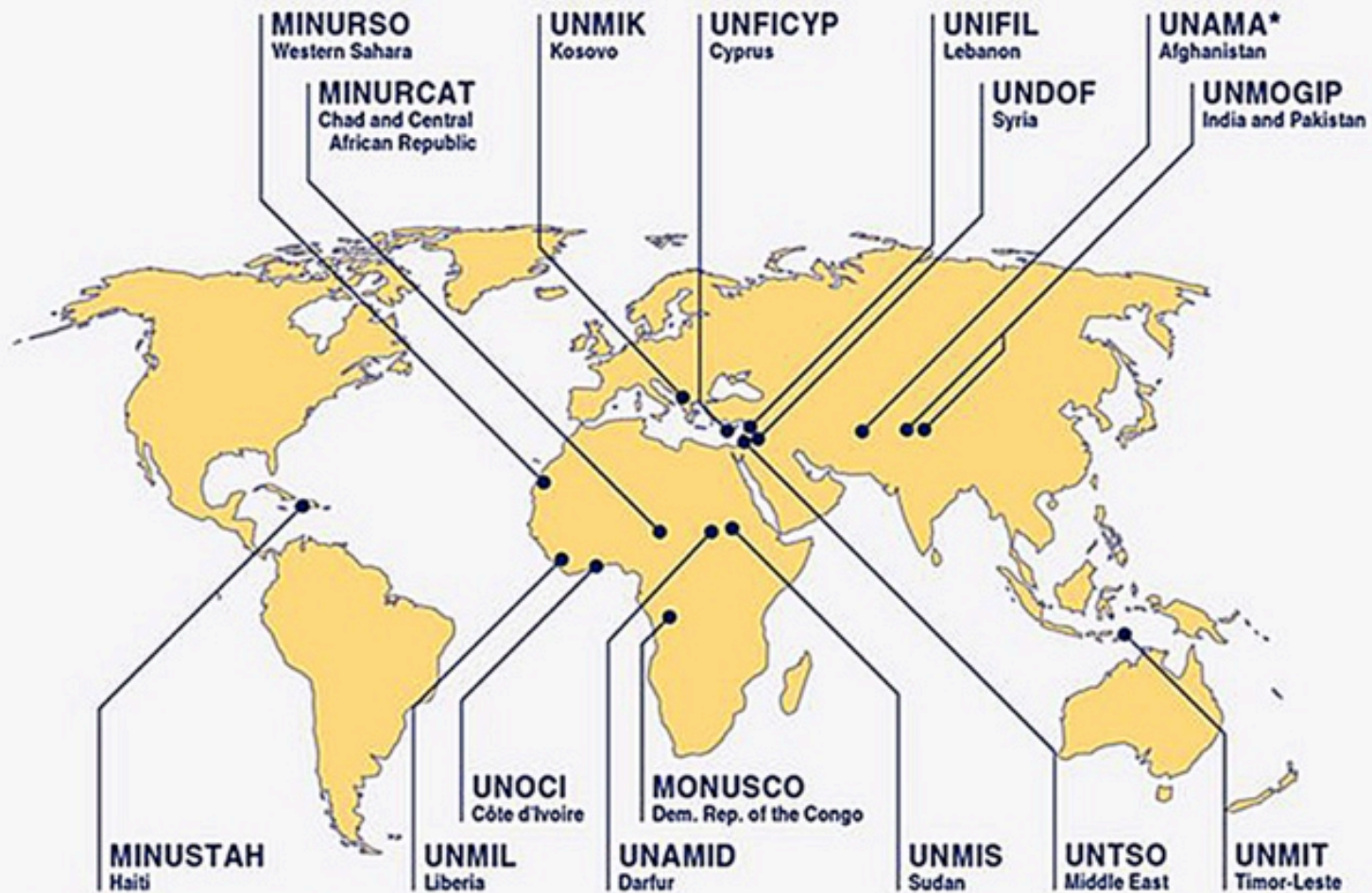
Haitians have held anti-U.N. protests, accusing Nepalese peacekeepers of bringing cholera to Haiti. In the northern city of Cap-Haitien, hundreds of protesters gathered on Nov. 15, hurling stones at U.N. peacekeepers, setting up burning barricades and torching a police station. The riots have disrupted efforts to combat the growing health epidemic.

Image 3: when cholera came to Haiti



A UN peacekeeper from Brazil shoots tear gas to demonstrators during a protest in Port-au-Prince, Nov. 18.

MISSIONS ADMINISTERED BY THE DEPARTMENT OF PEACEKEEPING OPERATIONS



Map No. 4259 Rev. 11(E) UNITED NATIONS
July 2010

* political mission

Department of Field Support
Cartographic Section

Continuing image of UN Peacekeepers



FEATURE: "We invest in peace"

A member of the UN Police Unit during a patrol in the Malian city of Timbuktu. Credit: MINUSMA/Harandane Dick

US State Department Priorities



The screenshot shows the official website of the U.S. Department of State. At the top left is the Department of State seal. The main header reads "U.S. DEPARTMENT OF STATE" and "DIPLOMACY IN ACTION". On the right, there is a search bar with the text "Enter keyword here" and a "Search" button. Below the header, a navigation bar includes links for "ABOUT STATE", "POLICY ISSUES", "COUNTRIES & REGIONS", and "EO & S". A secondary navigation bar mentions "SECRETARY KERRY". The main content area features a breadcrumb trail: "Home » Under Secretary for Public Diplomacy Affairs: Office of Press Relations » Press Release » United States in UN Peacekeeping: Strengthening UN Peacekeeping and Conflict Prevention Efforts". The title of the press release is "The United States in UN Peacekeeping: Strengthening UN Peacekeeping and Conflict Prevention Efforts", followed by "Fact Sheet", "Office of the Spokesman", "Washington, DC", and the date "September 23, 2010". A red box highlights a key statement: "Increasing the effectiveness of UN peacekeeping is one of the highest priorities for the United States at the United Nations. Multilateral peacekeeping shares the risks and responsibilities of maintaining international peace and security, and is a cost-effective way to help achieve U.S. strategic and humanitarian interests." Below this, a paragraph elaborates on this point, mentioning a meeting with troop-contributing nations in September 2009. On the right side of the page, there are links for "Mobile", "Video", "RSS", "Subscribe", and "Contact". A "Short URL" section provides the link "http://go.usa.gov/3T7qj". A "Country Profiles" section includes a dropdown menu labeled "Select a Country or Other Area". At the bottom right, the source is cited as "Source: Office of the Spokesman, United States Department of State. Fact Sheet, September 23, 2010." with the URL "(http://www.state.gov/r/pa/prs/ps/2010/09/147928.htm)".

U.S. DEPARTMENT OF STATE
DIPLOMACY IN ACTION

Browse by:
Topic | Speaker | Publication | Location | Date

Enter keyword here Search

SECRETARY KERRY

ABOUT STATE POLICY ISSUES COUNTRIES & REGIONS EO & S

Home » Under Secretary for Public Diplomacy Affairs: Office of Press Relations » Press Release » United States in UN Peacekeeping: Strengthening UN Peacekeeping and Conflict Prevention Efforts

The United States in UN Peacekeeping: Strengthening UN Peacekeeping and Conflict Prevention Efforts

Fact Sheet
Office of the Spokesman
Washington, DC
September 23, 2010

Increasing the effectiveness of UN peacekeeping is one of the highest priorities for the United States at the United Nations. Multilateral peacekeeping shares the risks and responsibilities of maintaining international peace and security, and is a cost-effective way to help achieve U.S. strategic and humanitarian interests. In September 2009, President Obama hosted the first-ever meeting with the leaders of the top troop-contributing nations to UN peacekeeping operations. This meeting underscored America's commitment to this vital tool, which allows countries around the world to share the burden for protecting civilians and fragile peace processes in societies emerging from war. Since that meeting, the U.S. Government has been working to enhance its support for UN and regional peacekeeping and to operationalize the commitments that the President outlined.

Mobile Video RSS Subscribe Contact

Short URL:
<http://go.usa.gov/3T7qj>

Country Profiles

Select a Country or Other Area

Source: Office of the Spokesman, United States Department of State. Fact Sheet, September 23, 2010.
(<http://www.state.gov/r/pa/prs/ps/2010/09/147928.htm>)

Vibrio cholerae

More than 200 serological groups of *Vibrio cholerae*

(only **two** associated with epidemic cholera)

Incubation period:
typically 2-5 days

Serogroup O1

(epidemic cholera - found in Haiti
and other locations)

Serogroup O139

(epidemic cholera - found
mainly in Asia)

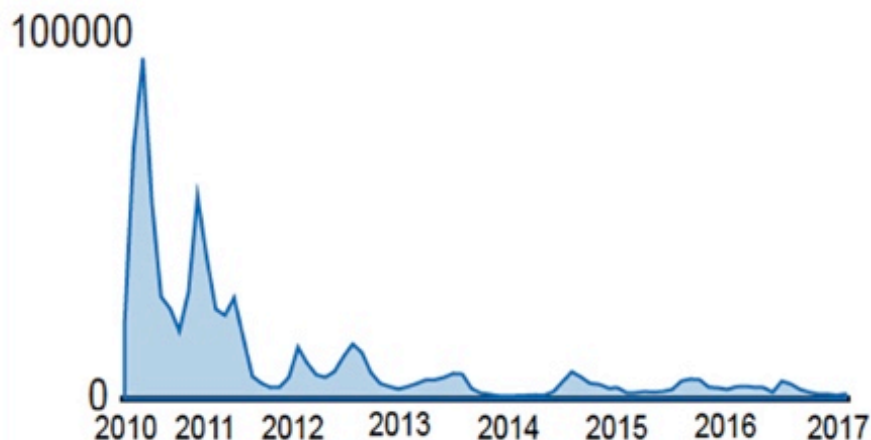
CHOLERA CASES (DELR* available data)

OCT 2010 - JUNE 2017



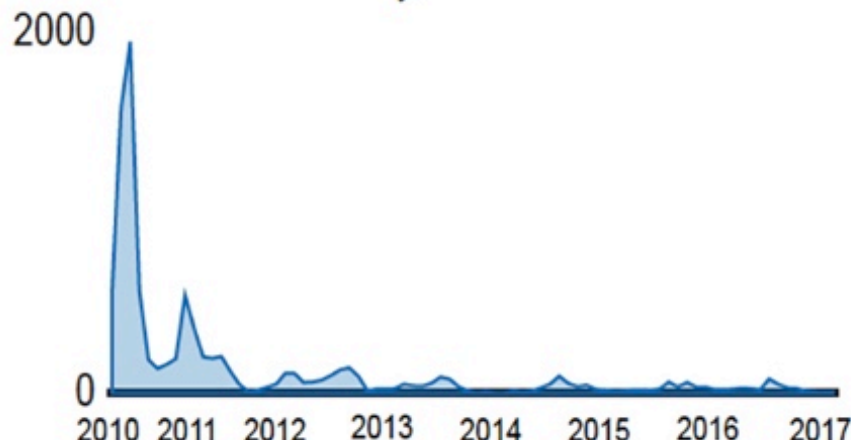
CUMULATIVE CASES

813K



CUMULATIVE DEATHS

9,676



* Direction d'Epidémiologie de Laboratoire et de Recherches

Source: OCHA. Haiti Cholera Figures, as of June 30, 2017
www.unocha.org and www.reliefweb.int, July 24, 2017.

Need for Cholera Outbreak Investigation

- First time in Haiti
- Assess origin
 - Determine culpability, if any
 - Craft future prevention policies
- Assess nature and extent of spread

Cholera arrival and early spread during first week

2010

Oct. 16

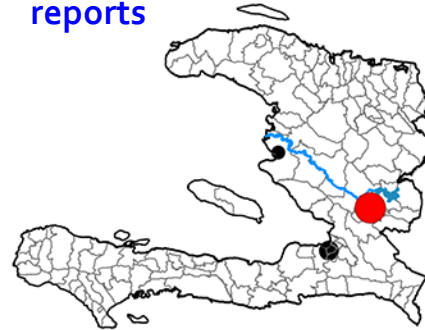


Oct. 17



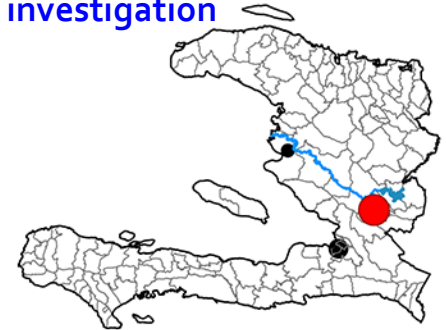
Oct. 18

Cuban Medical Brigade reports



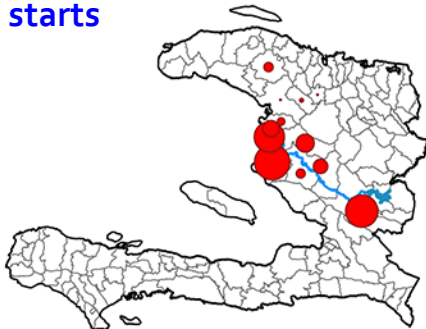
Oct. 19

Haitians assemble team for investigation



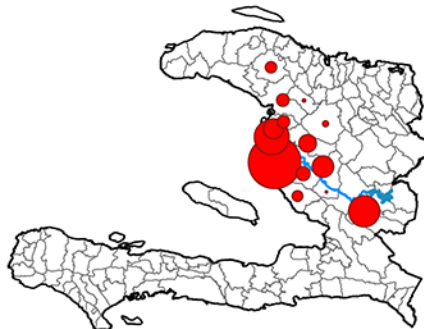
Oct. 20

Haitian field investigation starts

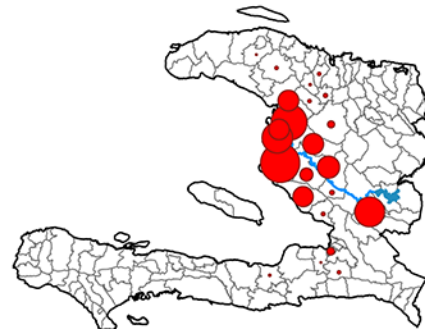


Oct. 21

PAHO announcement



Oct. 22



Number of cholera patients



N↑

Made with Philcarto (<http://philcarto.free>)

Source: Frerichs RR et al. "Nepalese origin of cholera epidemic in Haiti." *Clinical Microbiology and Infection* 18(6), E158-163, June 2012 (epub April 17, 2012).

Haitian team assembled to investigate headed by nurse epidemiologist

Oct. 19

**Haitians assemble team for
investigation**



HAITI EPIDEMIE

MIREBALAIS CHOLERA

lenouvelliste.com

Report of Haitian field investigation

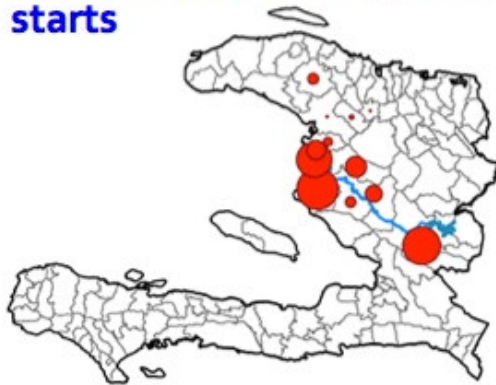
SUPPRESSED

MINISTRE DE LA SANTE PUBLIQUE ET DE LA POPULATION (MSPP)
UNITE DE GESTION DU PROJET MSPP/CDC/PEPFAR (UGP)

Rapport de Mission au Département Sanitaire du Centre, Bas Plateau

Oct. 20

Haitian field investigation
starts



responsable SCMP, UGP/ MSPP/PEPFAR

responsable SE, LNSP/MSPP

hauffeur UGP

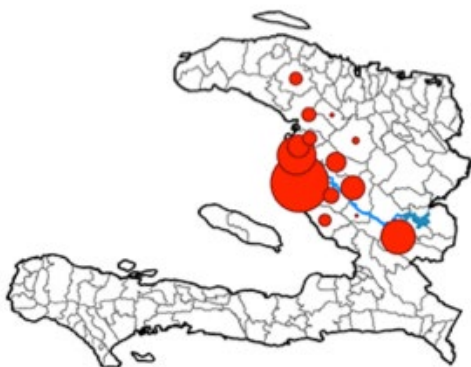
à l'alerte d'une épidémie de Diarrhée aqueuse aigue dans le Bas-Plateau
hérentes à cette crise
ogiste de la zone dans ses actions de lutte.

Suivi de l'Epidémie de Choléra dans le Bas-Plateau

Résumé : Les soixante-et-un cas de diarrhée notifiés par la Coopération Médicale Cubaine (CMC) pour la 41^e semaine épidémiologique, à l'Hôpital Communautaire de Mirebalais (HCM) n'étaient autres qu'une épidémie de Choléra qui a éclaté dans le Bas Plateau (BP) pour s'étendre ensuite dans le Bas Artibonite. Jusqu'au 23 Octobre 2010 (41^e et 42^e sem) dans le DSC seulement le BP a été touché. Un millier de personnes affectées ont eu recours aux soins, une centaine (107) a été hospitalisée et onze décès. La Prison Civile n'a pas été épargnée 34 cas parmi eux quatre décès. Au début l'Hôpital La Colline de Lascahobas, recevait surtout les prisonniers en provenance de Mirebalais. Le 22 Octobre, il a admis deux cas en provenance de Lascahobas, ces cas vont être investigués pour savoir s'ils ont été infectés à Lascahobas ou ailleurs.

Oct. 21

PAHO announcement



PAHO announcement of cholera epidemic



Pan American
Health
Organization



World Health
Organization
REGIONAL OFFICE FOR THE Americas



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Home > Press Releases > PAHO Responds to Cholera Outbreak in Haiti

...in St. Marc, Grande Saline and Mirebalais.

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Press Contacts

Leticia Linn, Tel. 202 974 3440
Sebastián Oliel, Tel. 202 974 3459
Sonia Mey Schmidt, Tel 202 974 3036

PAHO Responds to Cholera Outbreak in Haiti

Washington, Oct. 21, 2010 – The Pan American Health Organization said today that it has received laboratory confirmation of cases of cholera in Haiti, in Artibonite province, and is responding to help the Ministry of Health assess the situation and respond appropriately to save lives. So far, PAHO has been informed that more than 1,500 cases of severe diarrhea and at least 138 deaths have been reported in St. Marc, Grande Saline, and Mirebalais.

PAHO has mobilized epidemiologists and other experts from its office in Port-au-Prince and from other countries to help local and national authorities assess and deal with the event, which marks the first time cholera has appeared on the island of Hispaniola, shared by Haiti and the Dominican Republic.

The organization is collaborating with partners including the US Centers for Disease Control, US Agency for International Development, OCHA, Medecins Sans Frontieres, and other non-government organizations to combat the outbreak.

Cholera is an disease caused by ingestion of food or water contaminated with the bacterium *Vibrio cholerae*. An acute intestinal infection, it causes severe watery diarrhea and vomiting, and can quickly lead to severe dehydration and death. Most cases can be treated with oral rehydration salts, though more severe cases need hospitalization with intravenous fluids and appropriate antibiotics. The goal of treatment is to keep up with fluid loss caused by diarrhea and vomiting.

WHO News

- WHO/UNICEF highlight need to further reduce gaps in access to improved drinking water and sanitation
- Air quality deteriorating in many of the world's cities
- United Nations agencies report steady progress in saving mothers' lives



Aprender el pasado y avanzar hacia el futuro con confianza



English | Spanish | Portuguese | French

PAHO Campaigns

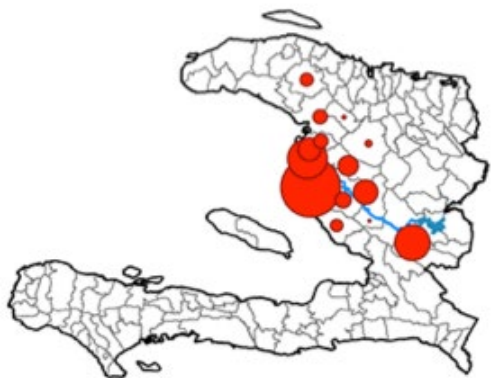


Initial news stories focused on coastal Saint Marc

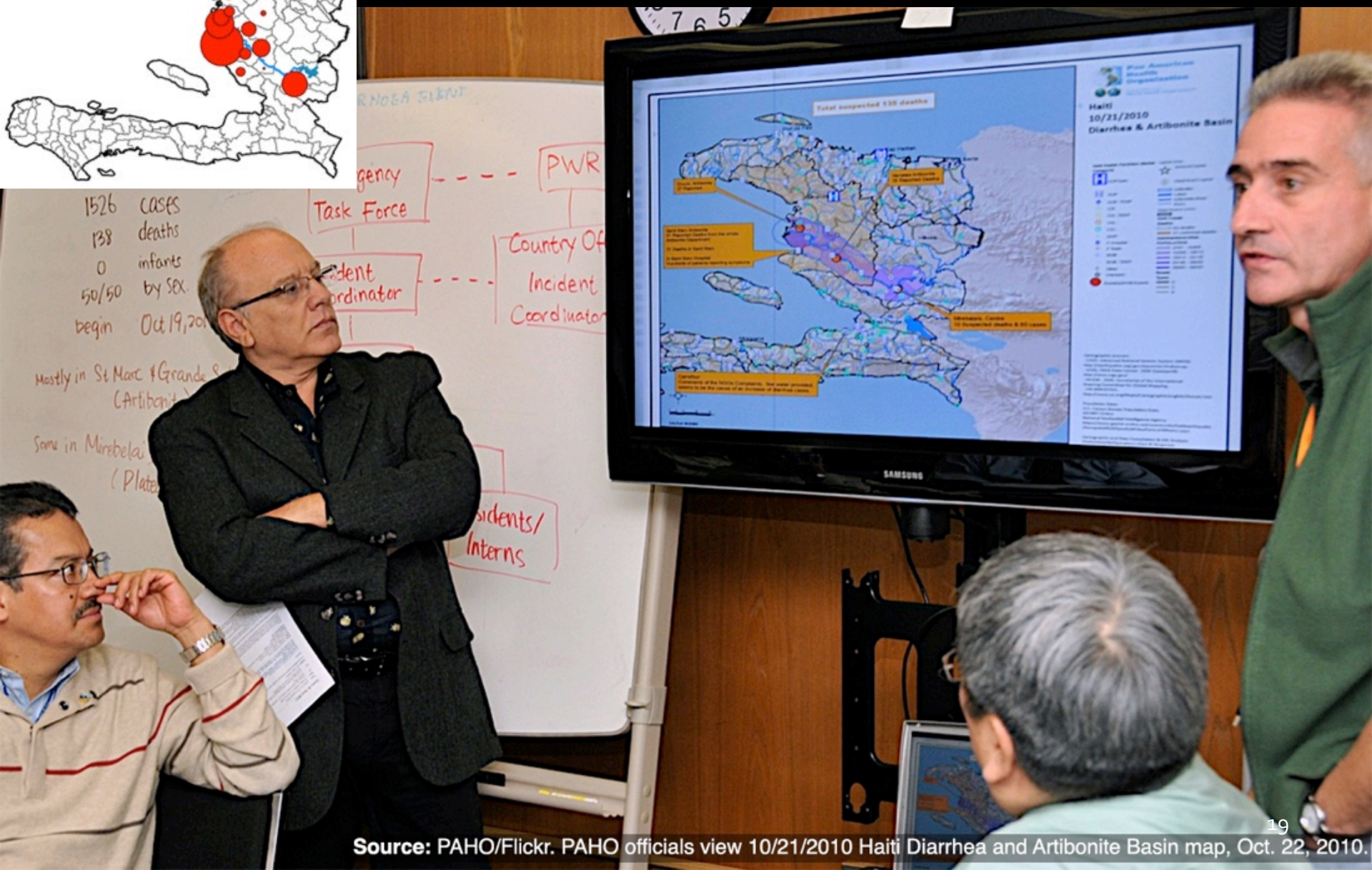


Oct. 21

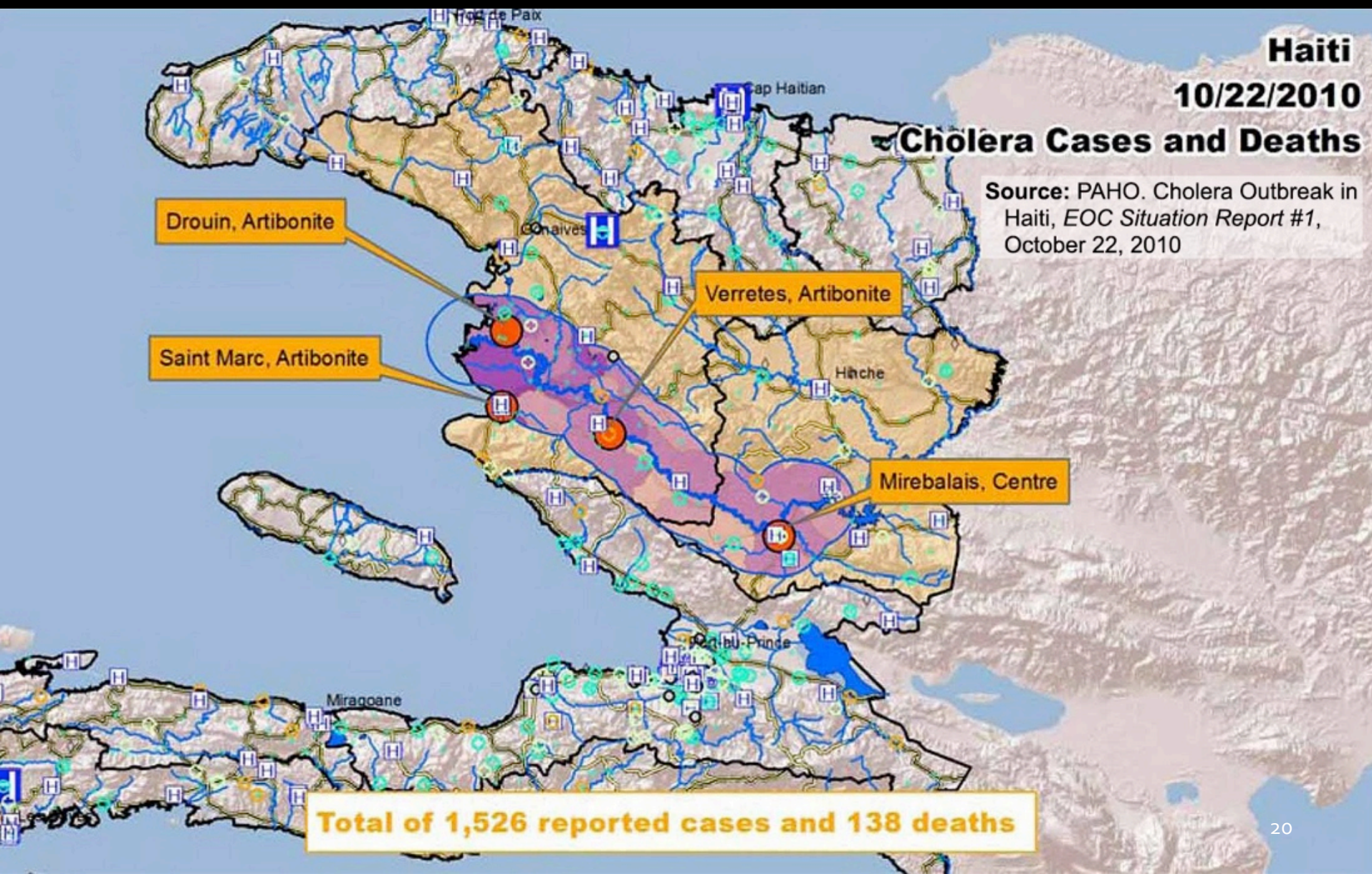
PAHO announcement



PAHO officials studying map



First PAHO map is issued following day

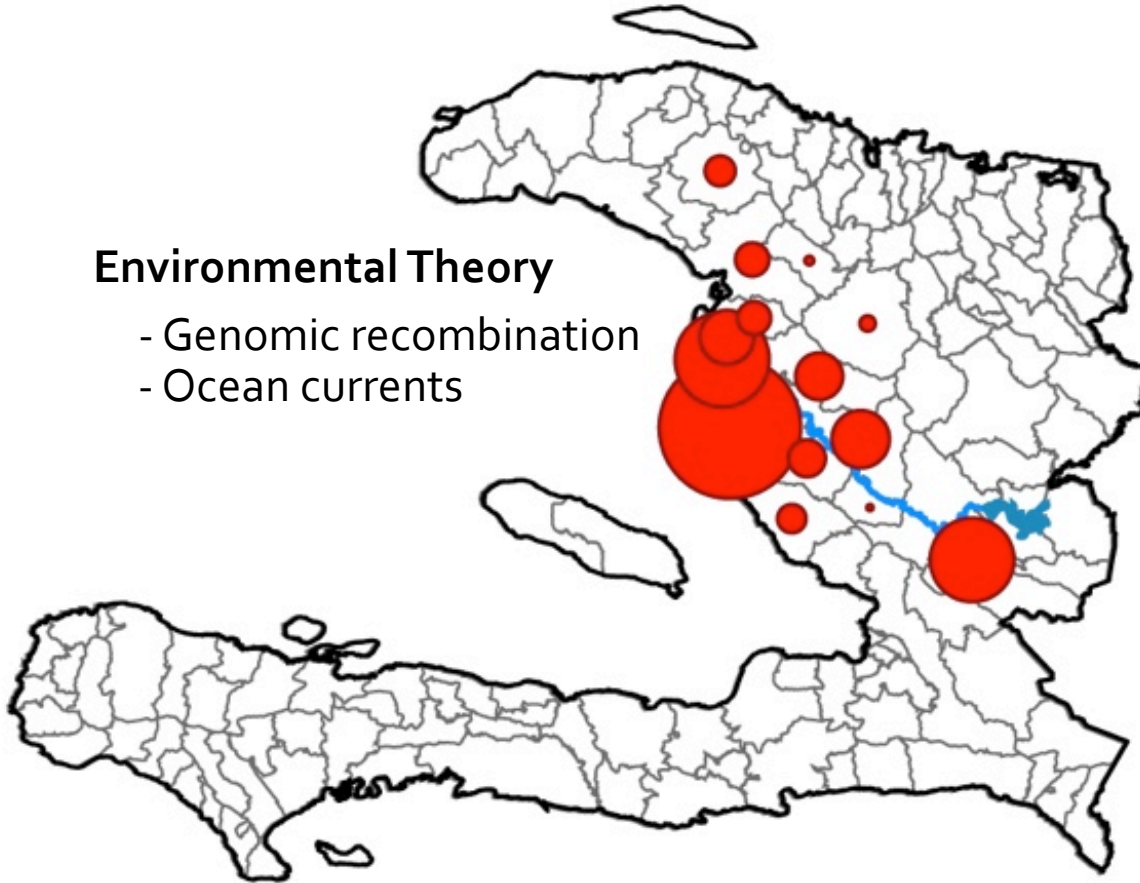


Cholera-origin theories

Oct. 21

Environmental Theory

- Genomic recombination
- Ocean currents



Human Activity Theory

- UN Nepalese peacekeepers

INNOCENCE

POLITICALLY
UNACCEPTABLE



Three days after PAHO announcement, CDC team (including several epidemiologists) visits Albert Schweitzer Hospital in Deschapelles

October 24, 2010



Early Comments on Seeking Origin

- Indifference

- “From our point of view,” said the UN spokesperson in Haiti, “[the origin] really doesn’t matter.”

- Too busy

- PAHO was focusing on “on treating people, getting a handle on this and saving lives.”

- Too costly

- Main CDC epidemiologist assigned to Haiti said it was unlikely that scientists would pinpoint where the outbreak began, and that he did not think mounting an all-out effort to find the answer “is a good use of resources.”

Rumors of cholera's origin were swirling around Haiti:
the outbreak started at a UN peacekeeping base near Mirebalais
by the village of Mèyè



International journalists visit UN peacekeeping camp near Mirebalais six days after PAHO Announcement

October 27, 2010

Sebastian Walker, *Al Jazeera*



Source: Walker, Sebastian. *Al Jazeera English*, Oct. 27, 2010

September 23, 2010



Jonathan Katz, *Associated Press*



Source: AP TELEVISION, October 27, 2010. Published July 30, 2015

Roberson Alphonse of Haiti's newspaper *Le Nouvelliste*



Haitian Journalist Roberson Alphonse at river by UN Annapurna Camp near Mèyé village

US Dept. of HHS and CDC

Administrative Hierarchy, 2009-2014



**HHS Delegation visits Haiti, April 2012
(including Sebelius and Frieden - center)**



U.S. Department of Health & Human Services

Secretary
Kathleen Sebelius
2009 - 2014



Operating Divisions

**Centers for Disease Control and Prevention
(CDC)***

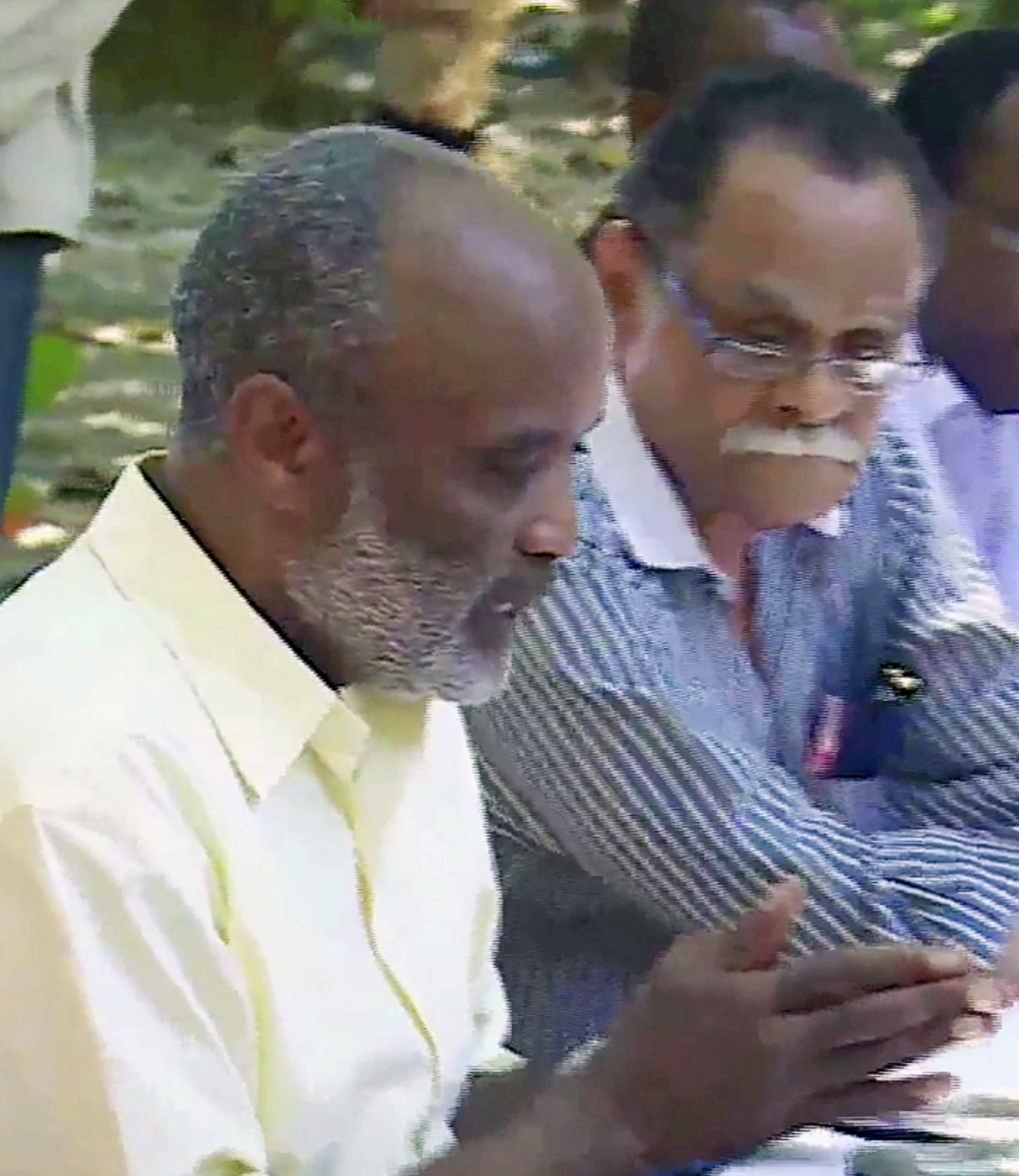
* Component of the Public Health Service

Director
Thomas Frieden, MD, MPH
2009 - 2016



Haitian government commissions French epidemiologist to investigate
Renaud Piarroux, MD, PhD arrives Nov. 7, 2010





Unique Allies

Haitian President **René Prével** and Minister of Health **Alex Larsen**

Nov. 8th, 2010: Unbeknownst to Piarroux, CDC officials already knew that the first laboratory-confirmed cholera samples had come from Mèyé, but there was no acknowledgement nor investigation.

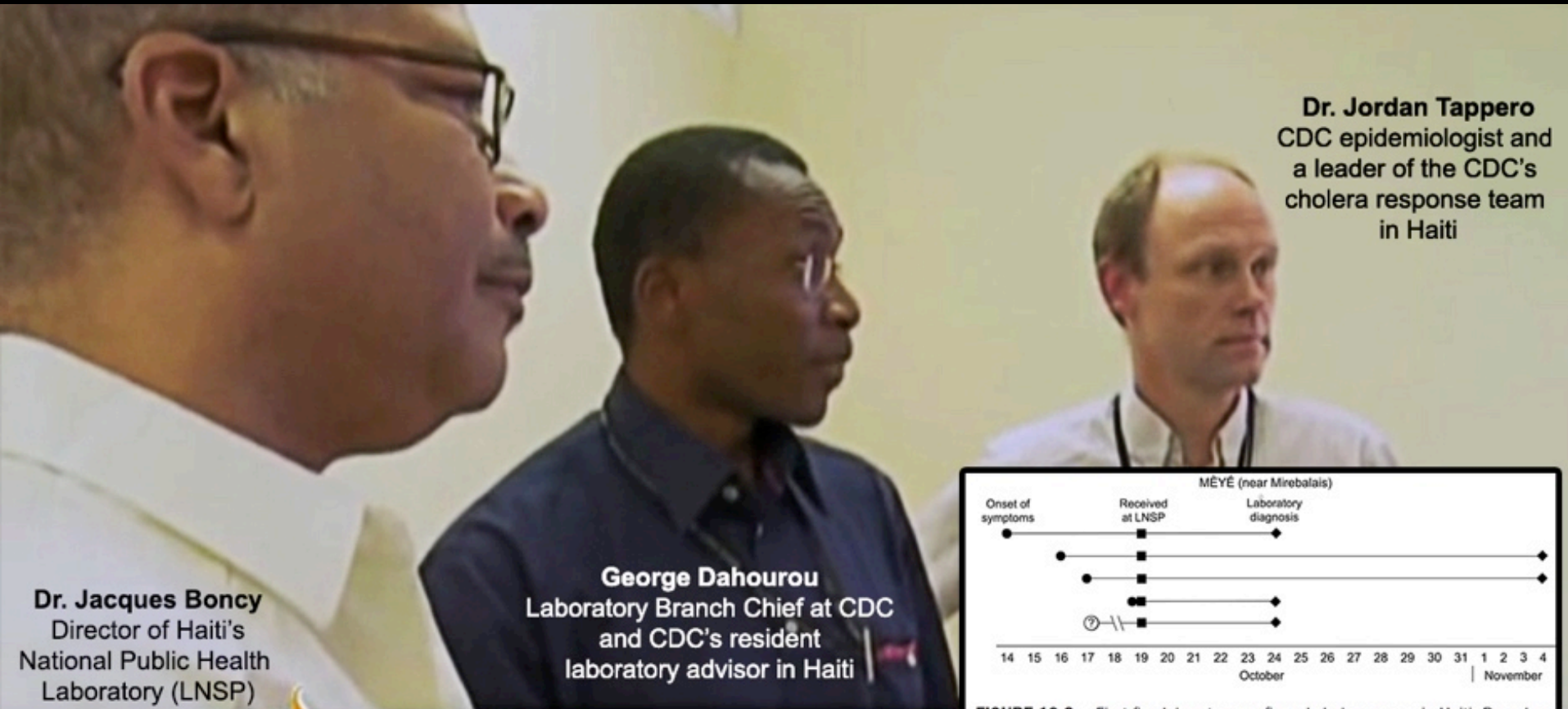
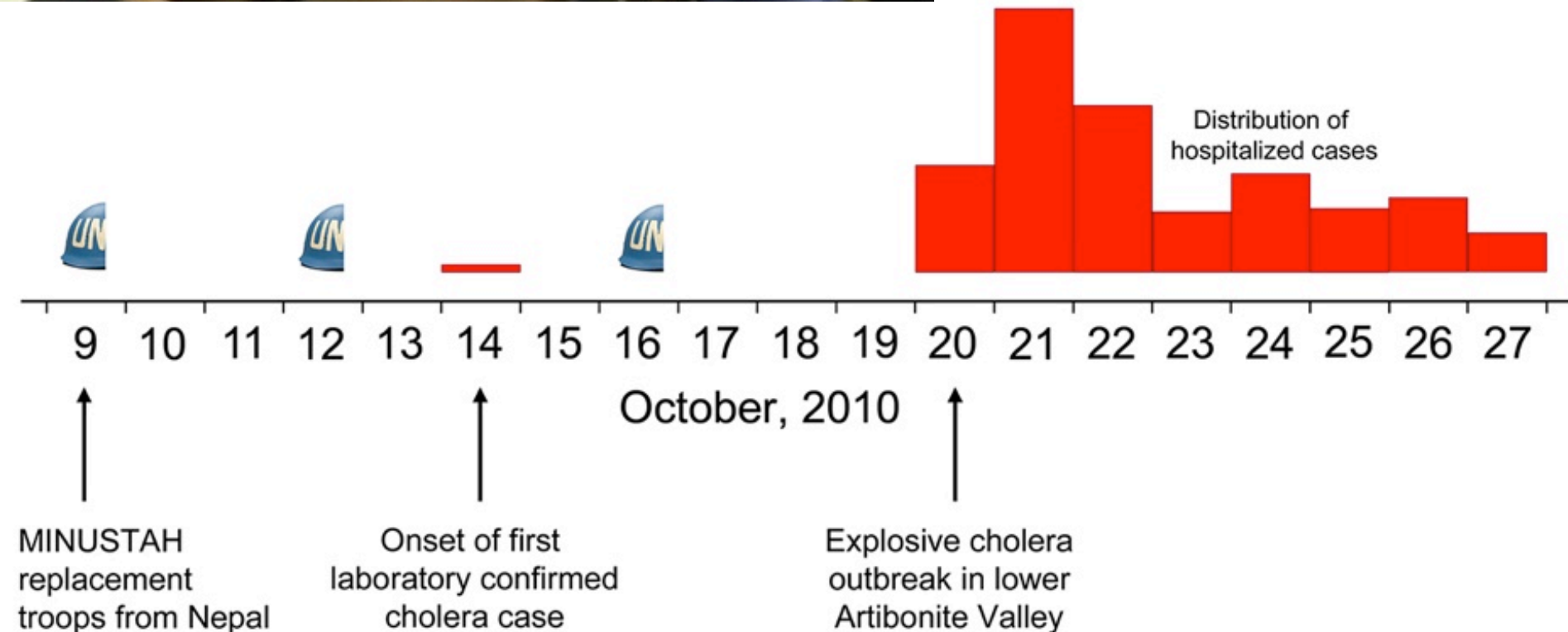


FIGURE 10.2. First five laboratory-confirmed cholera cases in Haiti. Based on data from Laboratoire National de Sante Publique, Port-au-Prince, Haiti.



GEORGE DAHOUROU
U.S. CENTER FOR DISEASE CONTROL

Replacement troops (every six months) arrive from Nepal



Camp of Nepalese UN Peacekeepers



Cholera-ridden Sewage



Start of Epidemic

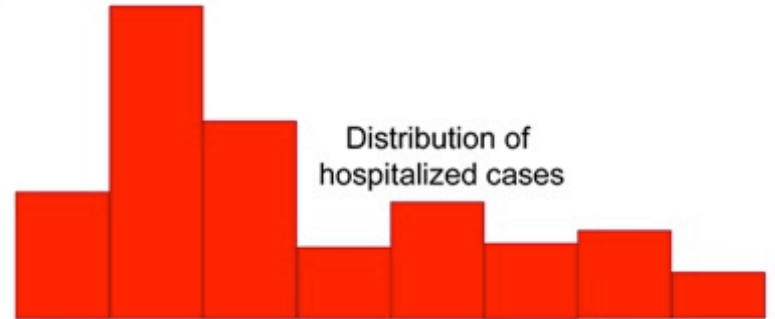
First Wave

Second Wave

Contents of MINUSTAH septic tanks dumped into river by replacement driver



Distribution of hospitalized cases



9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27

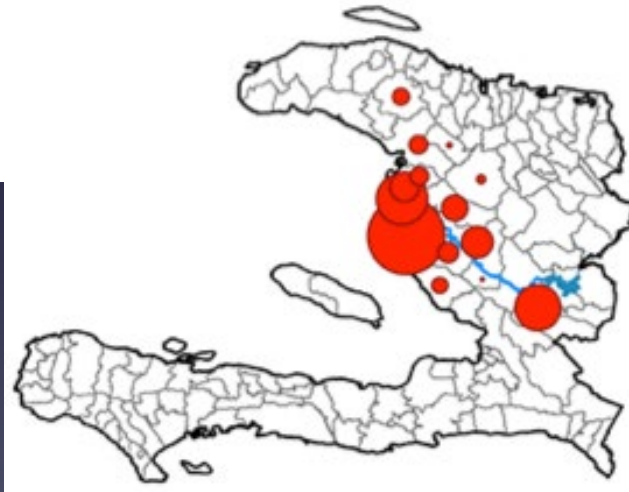
October

Oct. 21

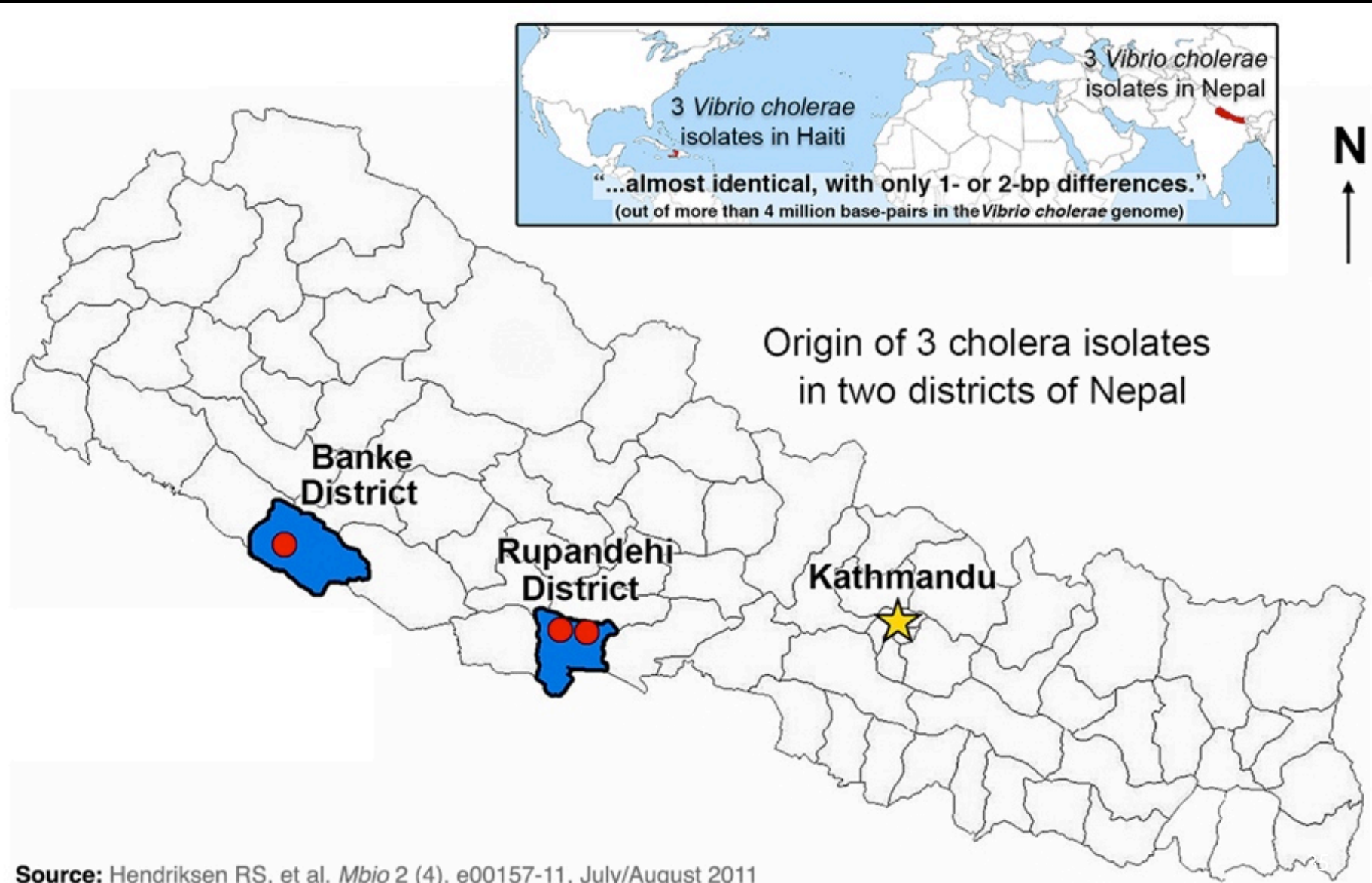
PAHO announcement

MINUSTAH replacement troops from Nepal

Onset of first laboratory confirmed cholera case



Comparison of *Vibrio cholerae* isolates Nepal and Haiti



Human Rights organizations blame United Nations



Mario Joseph, *Bureau des
Avocats Internationaux,
Port-au-Prince, Haiti*

Brian Concannon Jr., *Institute for Justice &
Democracy in Haiti (IJDH), Boston, MA*

Moral Responsibility

No mention of
legal responsibility

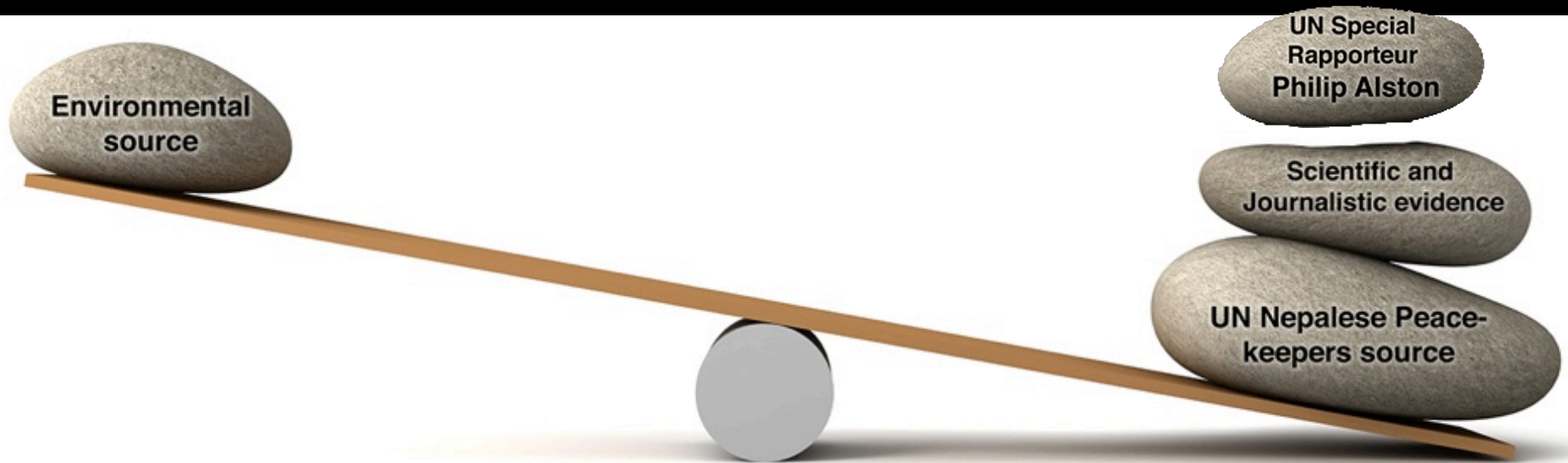


Ruling in Jan. 2015: United Nations cannot be sued for its alleged role in the Haiti cholera epidemic



Source: US District Court for the Southern District of New York. *Georges D, et al v United Nations, et al*. No 1:13-cv-7146. January 9, 2015.

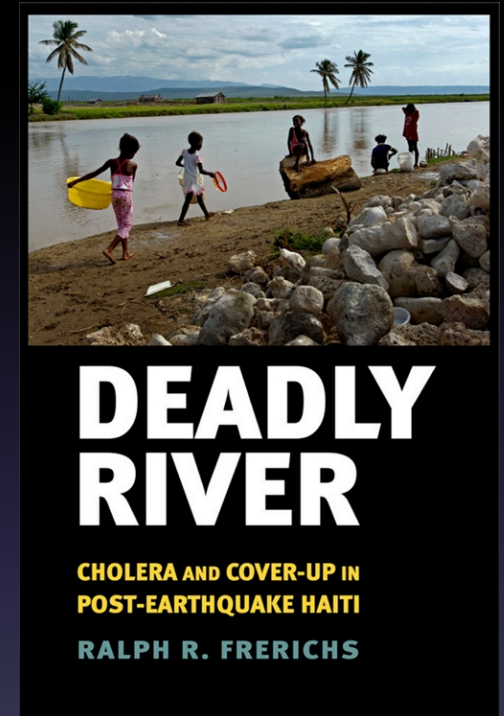
Tipping Point in Source Argument



NYU Law professor Philip Alston, *UN Special Rapporteur on extreme poverty and human rights*, in early August 2016 submitted the draft of a critical report on cholera in Haiti to UN Secretary-General Ban Ki-moon.

In this report, Alston tells the UN of the central role of *Deadly River*

“...the book provides a pain-staking and even-handed assessment of the scientific debates that have taken place.... it systematically vindicates the conclusions reached by one of the first international experts on cholera to investigate the outbreak in Haiti, Dr. Renaud Piarroux.”



Alston continued in his UN report

“The past policy of the United Nations relied on a claim of scientific uncertainty. That is no longer sustainable given what is now known. The United Nations was clearly responsible and it must now act accordingly.”

Three Op-Eds on cholera in Haiti

The Boston Globe

1 of 3

OPINION | RALPH R. FRERICHS

What the UN must do to wipe out cholera in Haiti

By Ralph R. Frerichs | AUGUST 22, 2016

Miami Herald

2 of 3

OP-ED

AUGUST 24, 2016 7:17 PM

Cholera in Haiti shows U.N. must change its ways

BY RALPH R. FRERICHS
AND RENAUD PIARROUX

The New York Times

3 of 3

The Opinion Pages | OP-ED CONTRIBUTOR

The U.N.'s Responsibility in Haiti's Cholera Crisis

By RENAUD PIARROUX | SEPT. 7, 2016

Philip Alston submits his final version of the report and speaks to UN on October 25, 2016 about cholera



UN WEB TV

The United Nations Live & On-demand

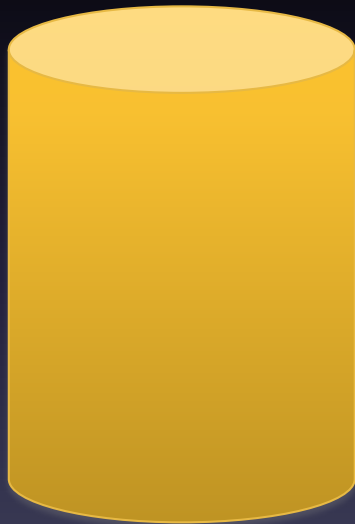


P. ALSTON
SPECIAL RAPPORTEUR

UN Haiti Cholera Response Multi-Partner Trust Fund

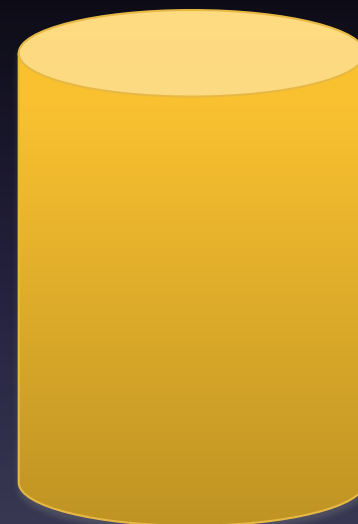
\$200 million

Treatment and elimination efforts



\$200 million

Compensation for cholera victims
(via Human Rights groups)



Start date: Oct. 2016
End date: Dec. 2022

Actual deposits so far by UN member states
About \$10 million (2.5%)

Changing of the Guard on January 1, 2017

Secretary General Ban Ki-moon (OUT) and
Secretary General António Guterres (IN)





Security Council approves 'historic' political Haiti mission, ending UN peacekeeping role in the country

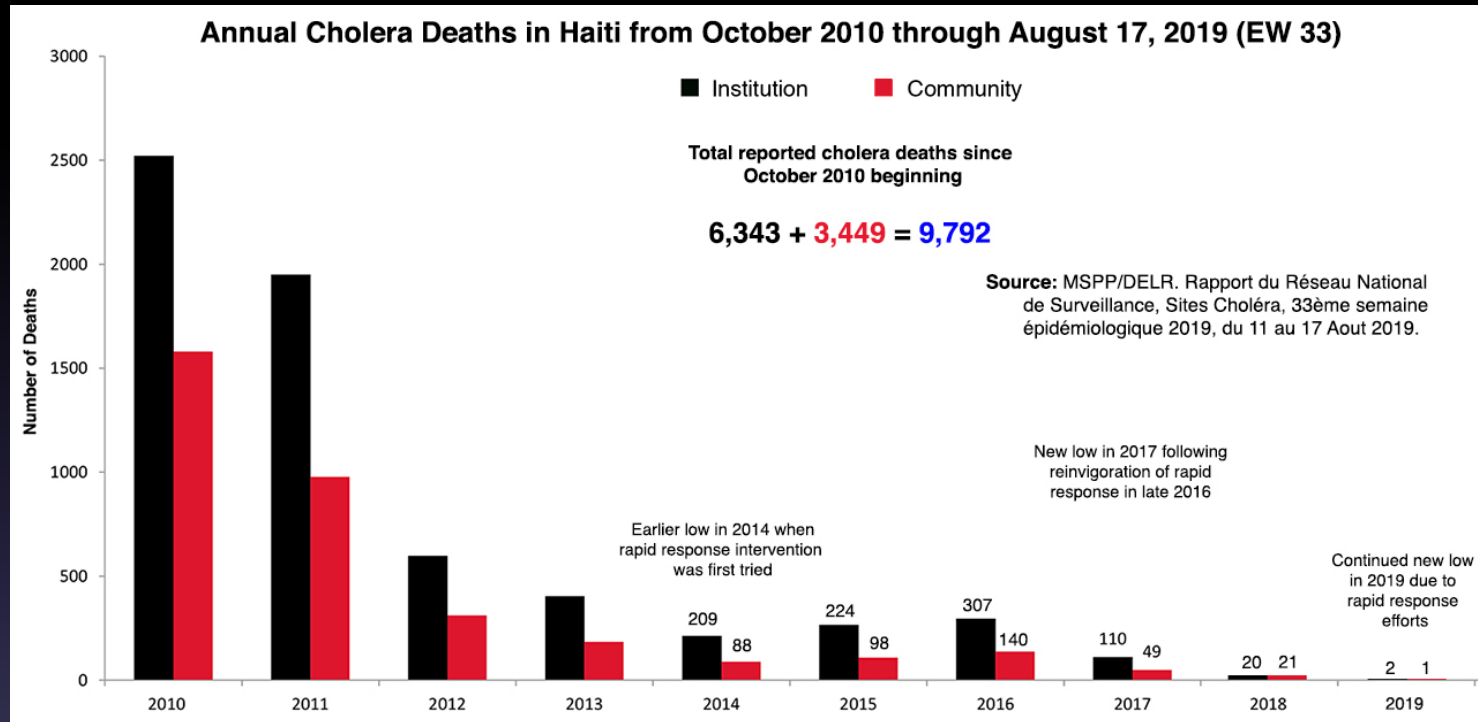
25 June 2019 | [Peace and Security](#)



Leonora Baumann / UN MINUJUSTH | Miragoane, 30 October 2018: female members of the Bangladeshi Formed Police Units greet Helen La Lime, the UN Special Representative in Haiti and Head of MINUJUSTH

ENDING DATE: **OCTOBER 16, 2019**

Current State (mid-August, 2019)



No cholera deaths nor positive laboratory tests
since the February 2019

Updates

Book (French), March, 2019

<http://www.deadlyriver.com>

DEADLY RIVER
CHOLERA and COVER-UP in POST-EARTHQUAKE HAITI
RALPH R. FRERICHS

IMAGE SUPPLEMENT

DEADLY RIVER About Purchase Reviews Dropdown+ Dropdown+ Dropdown+ PDFs mMAPs

"It is beyond the scope of the present report to recount the analyses and conclusions of the various studies, but this task has been undertaken systematically in [Deadly River]. Its author Ralph R. Frerichs is professor emeritus of epidemiology at UCLA and the book provides a painstaking and even-handed assessment of the scientific debates that have taken place. For present purposes, it must suffice to note that the book concludes that the peacekeepers were responsible for bringing cholera. In doing so, it systematically vindicates the conclusions reached by one of the first international experts on cholera to investigate the outbreak in Haiti, Dr Renaud Piarroux. It also deplores what it describes as a 'misinformation campaign to protect the UN and the peacekeeping program.'"

DR: Slide 1

- Philip Alston, UN Special Rapporteur for Extreme Poverty and Human Rights, and Professor of International Law, New York University. *Report to the United Nations General Assembly, A/71/367, August 26, 2016.*

CUBA **HAITI** **DOMINICAN REPUBLIC**

Artibonite River

Mirebalais

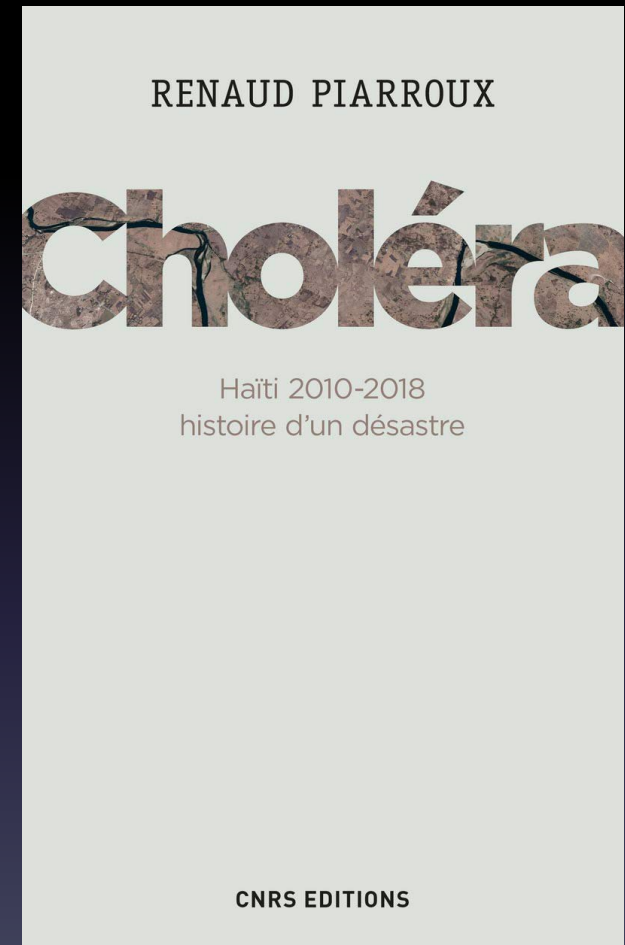
Author with Renaud Piarroux
Knighted, French Legion of Honor, 2017

Click arrow for site instructions in Slide 2

See Epilogue 2, slides 15-17

9.9 million people (2010) 10.0 million people (2010)

Island of Hispaniola



Issues not yet settled

- Will the United Nations accept the cholera origin findings in Haiti and assume legal responsibility?
- Will the UN fully fund the proposed cholera elimination and victim compensation programs in Haiti?
- Will the UN invoke and actively enforce policies to prevent similar disease occurrences in countries being served by UN peacekeepers?