



GLOBAL TASK FORCE ON
CHOLERA CONTROL

CHOLERA SURVEILLANCE IN CAMEROON

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Plan

- Cameroon's health system overview
- Implementation of surveillance
- Laboratory confirmation
- Data management
- How surveillance orientates response

CAMEROON'S HEALTH SYSTEM OVERVIEW



CAMEROON'S HEALTH SYSTEM OVERVIEW

Area: 475,650 km²

Type of State: Unitary Republic based on parliamentary democracy.

Borders: 590 km coastline; 4591 km land borders

Type of Economy: Lower-middle-income economy

Total Population: 25,216,237

Density: 53 Inhabitants/km²

Urban Population: 56.4%

Official Language: French and English

Other Languages

Spoken: There are close to 250 African dialects.

Religion: Christians, Muslim and Tribal

Literacy Rate: 67.9%

National Currency: CFA Franc BEAC (XAF)

CAMEROON'S HEALTH SYSTEM

- Structured in three levels (central, intermediate and peripheral)
- Also structured in 3 sectors
 - Public sector
 - Private non-profit sector (religious denominations, associations and various NGOs) and those for-profit.
 - Sector of the traditional medicine which is an important component to the system and that cannot be ignored.
- Financing: Government (5%); Households (70%) and TFP (about 10%)

Central

- Coordinate, regulate, and develop concepts, strategies and policies in the field of health.
- Central services, general hospital and university teaching hospital

Intermediate (10 RDPH)

- Provide technical support to the health districts.
- Regional hospitals, regional funds

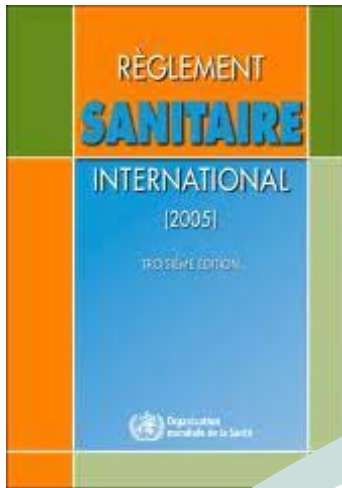
Peripheral (191 HD)

- Implement the national programs.
- District hospitals, medical centers and district health centers Communities

IMPLEMENTATION OF SURVEILLANCE (IDSR)



DISPOSITIF DE SURVEILLANCE



WHO AFRO IDSR Strategy, 1998
Cameroon 1st adaptation, 2002

WHO AFRO IDSR 2nd edition in 2010 to align with IHR, 2005
Cameroon 2nd adaptation in 2014 but not published

WHO AFRO IDSR 3rd edition in 2019 to consider emergency situations, «one health approach », etc.)
Cameroon 3rd adaptation and publication in September 2021

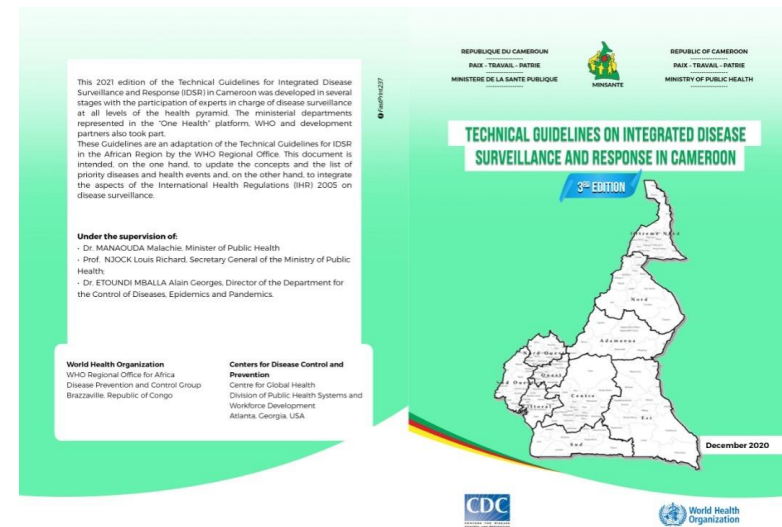


Photo IDSR technical guide adoption ceremony, September 2021

Challenge: Train IDSR stakeholders to the new edition

SURVEILLANCE STRATEGY

Based on standard case definition,
IDSR 3rd ed

Suspected cholera case: In areas where a cholera outbreak has not been declared. Any patient aged two years and older presenting with acute watery diarrhoea and severe dehydration or dying from acute watery diarrhoea.

In areas where a cholera outbreak is declared: any person presenting with or dying from acute watery diarrhoea.

Confirmed cholera case: A suspected case with *Vibrio cholerae* O1 or O139 confirmed by culture or PCR and, in countries where cholera is not present or has been eliminated, the *Vibrio cholerae* O1 or O139 strain is demonstrated to be toxigenic.

Type of surveillance implemented

- Passive surveillance
- Active surveillance
- Indicator based
- Event based

Challenges: *Strengthen and extend event based surveillance in community for early warning and response*

SURVEILLANCE STRATEGY

Notification

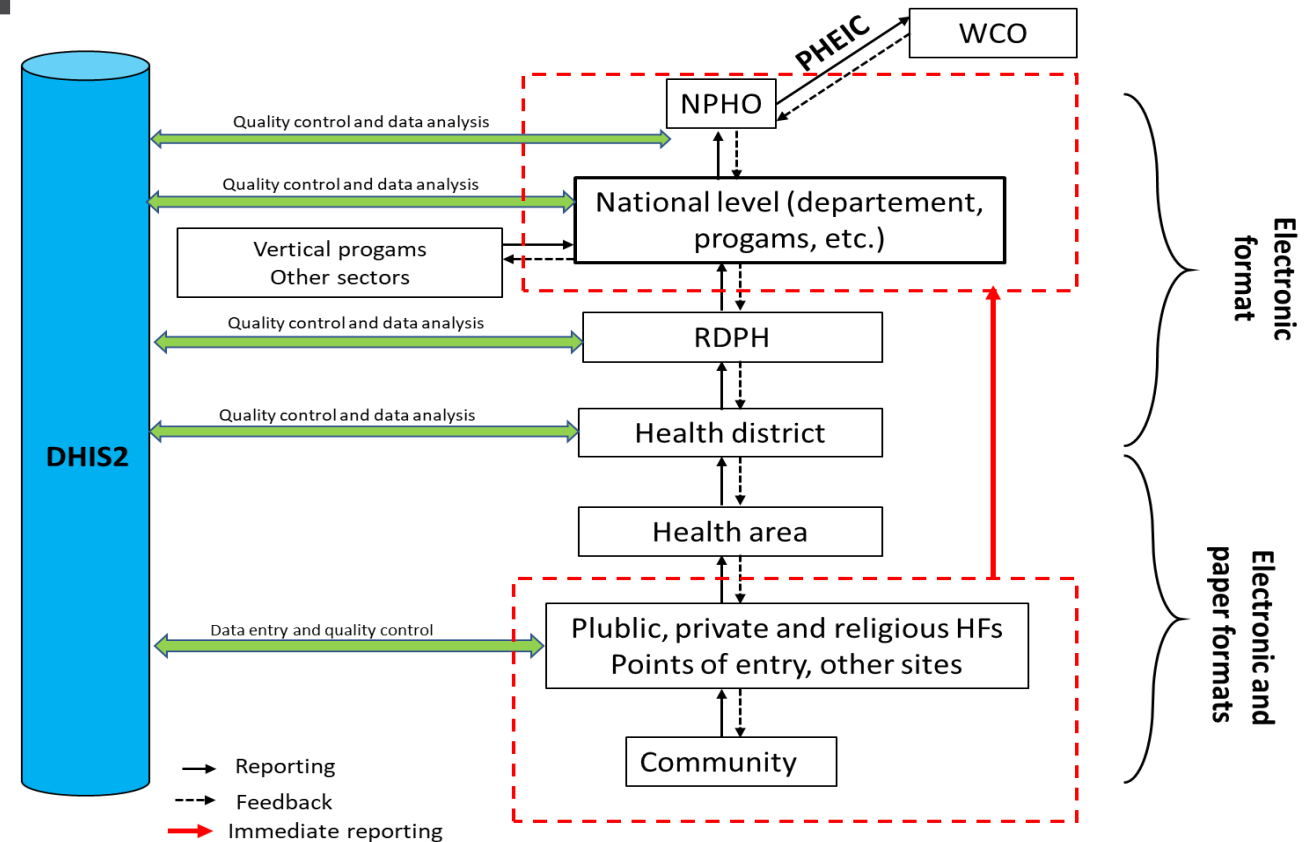
If a single case is suspected:

Report case-based information immediately.

Manage and treat the case according to national guidelines.

Enhance strict hand-washing and isolation procedures.

Conduct case-based investigation to identify similar cases not previously reported.



APPENDIX 2B. Algorithm of reporting immediately reportable diseases, conditions and public health events

LABORATORY CONFIRMATION



LABORATORY CONFIRMATION

Specimen: liquid stool +++ (or rectal swab)

Diagnostic tests: Isolate *V. cholerae* from stool culture and determine O1 serotype using polyvalent antisera for *V. cholerae* O1. If desired, confirm identification with Inaba and Ogawa antisera.

NB: RDT is performed at any level when a suspected case is identified

Culture results usually take 2 to 4 days after specimen arrives at the laboratory

3 main laboratories for confirmation (CPC Yaoundé, CPC Garoua, Laquintinie Hospital)

Many others have capacity but not yet designated

Samples are transfer using Cary-Blair transport medium which is supplied by WHO

LABORATORY CONFIRMATION

Challenges:

- Samples transport (no funds dedicated, integration to EPI system not yet systematic)
- Strengthening laboratory capacities in the ten regions to confirm cholera
- Sequencing...



DATA MANAGEMENT



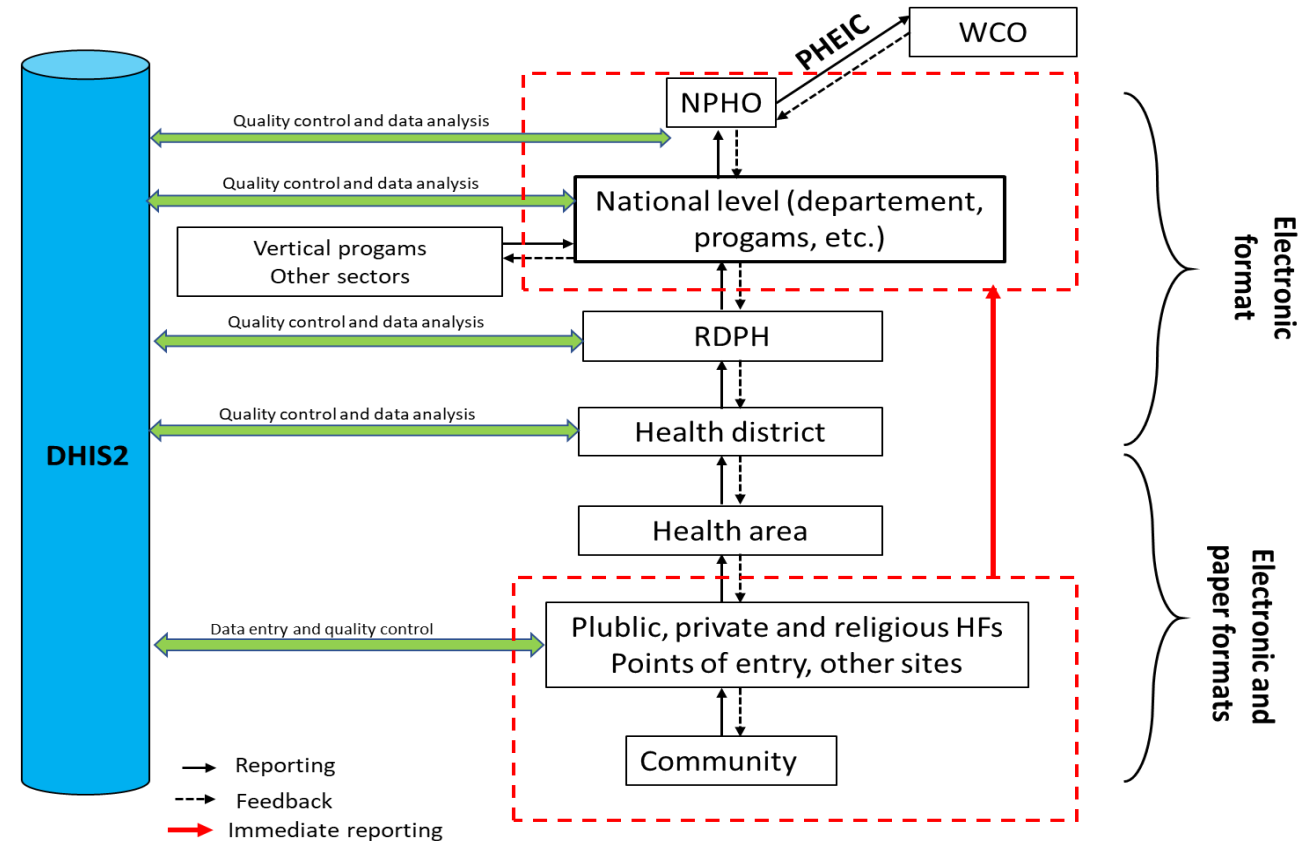
DATA MANAGEMENT

Routine data are collected through DHIS2 platform

For EBS, there are two databases with Excel and EWARS in regions where there are conflicts

Challenges:

- Management of data during outbreak (difficulties to fill tracker in DHIS, another databases for line listing...)
- Disparities of data



APPENDIX 2B. IDSR TG 3rd Ed, Algorithm of reporting immediately reportable diseases, conditions and public health events

STOCKPILE

MAINLY CHALLENGES

A playbook has been configured to generate requirements for a cholera outbreak scenario, but requires updating

WHO has a cholera kit quantification tool that requires training for users managing cholera supplies

OpenLMIS does not integrate the management of cholera products, so stock reporting is done by Excel file, level by level

Absence of storage spaces at all levels of the health pyramid to store cholera control products

It is recommended to make safety stocks in the cholera risk areas during the period when the risk rises, this has not been done

REPUBLIQUE DU CAMEROUN
PAIX - TRAVAIL - PATRIE

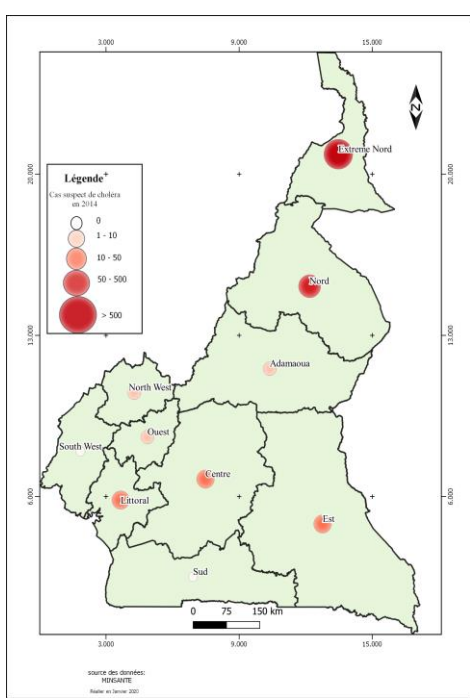
REPUBLIC OF CAMEROON
Peace - Work - Fatherland

**PLAN NATIONAL DE LA CHAINE D'APPROVISIONNEMENT
MEDICAL DE SOUTIEN A LA GESTION DES URGENCES DE SANTE
PUBLIQUE (Plan MCM)**

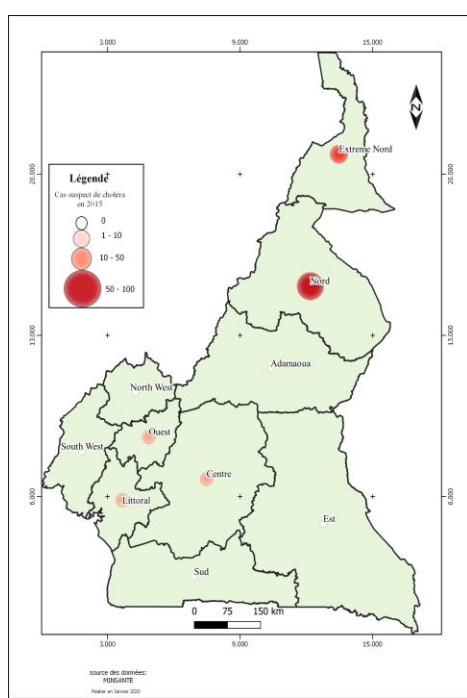


HOW SURVEILLANCE CONTRIBUTES TO RESPONSE

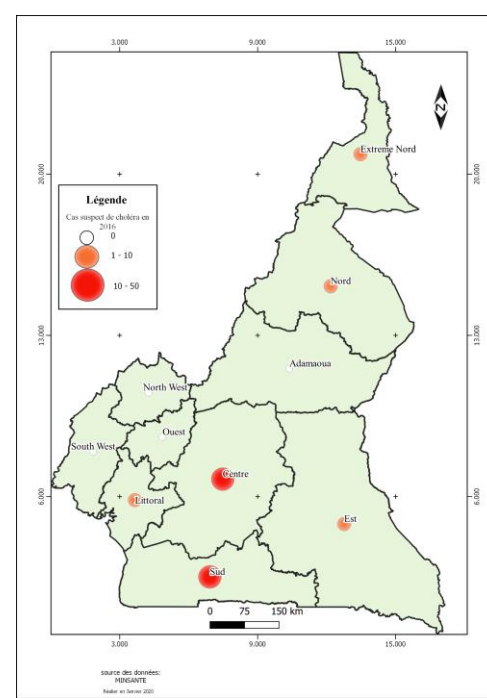




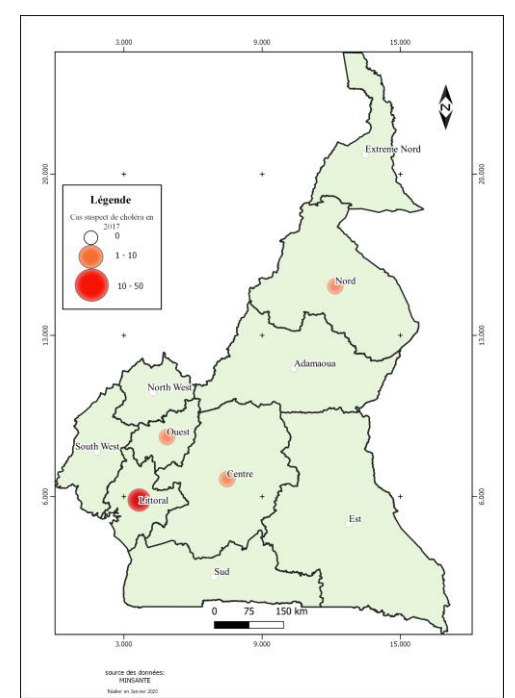
2014



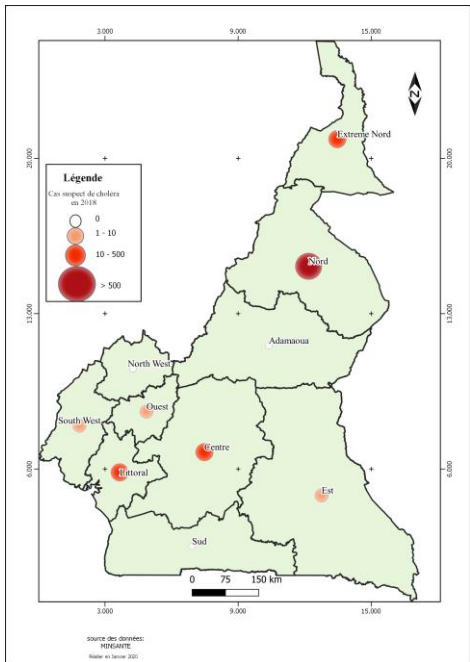
2015



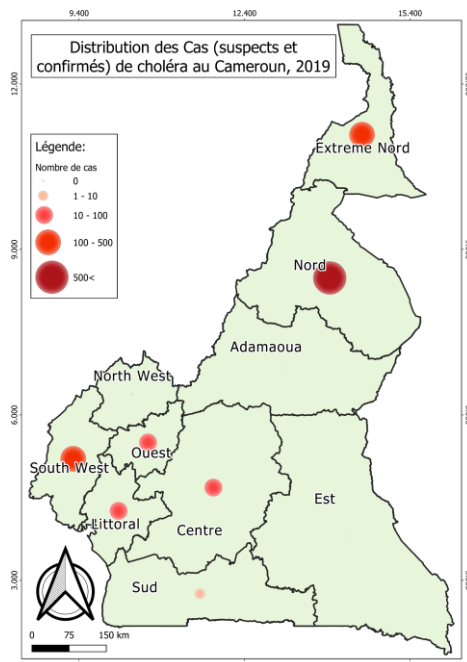
2016



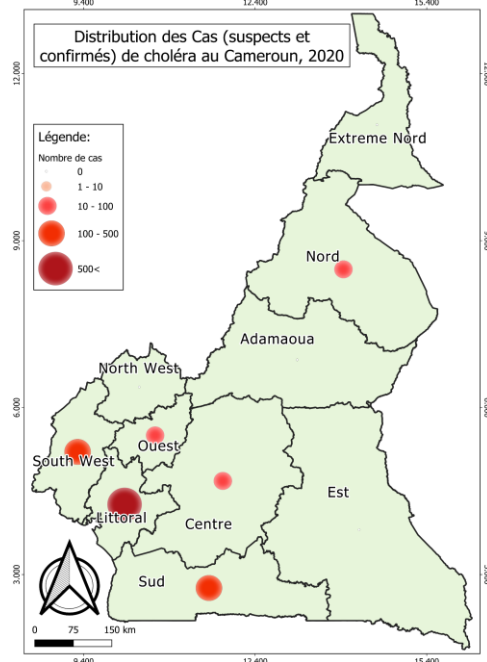
2017



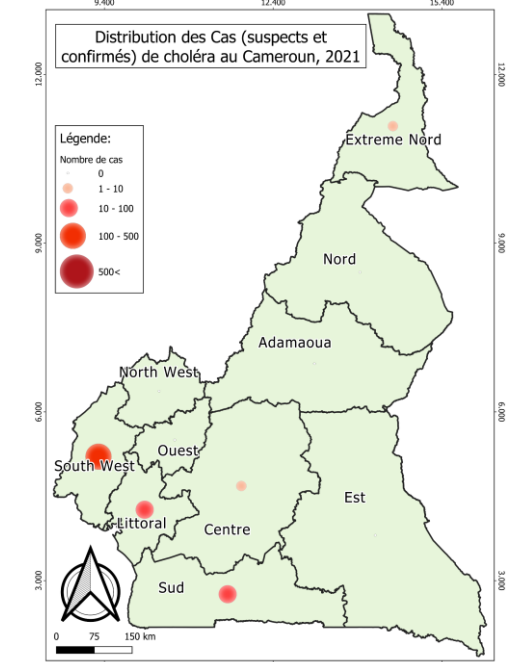
2018



2019

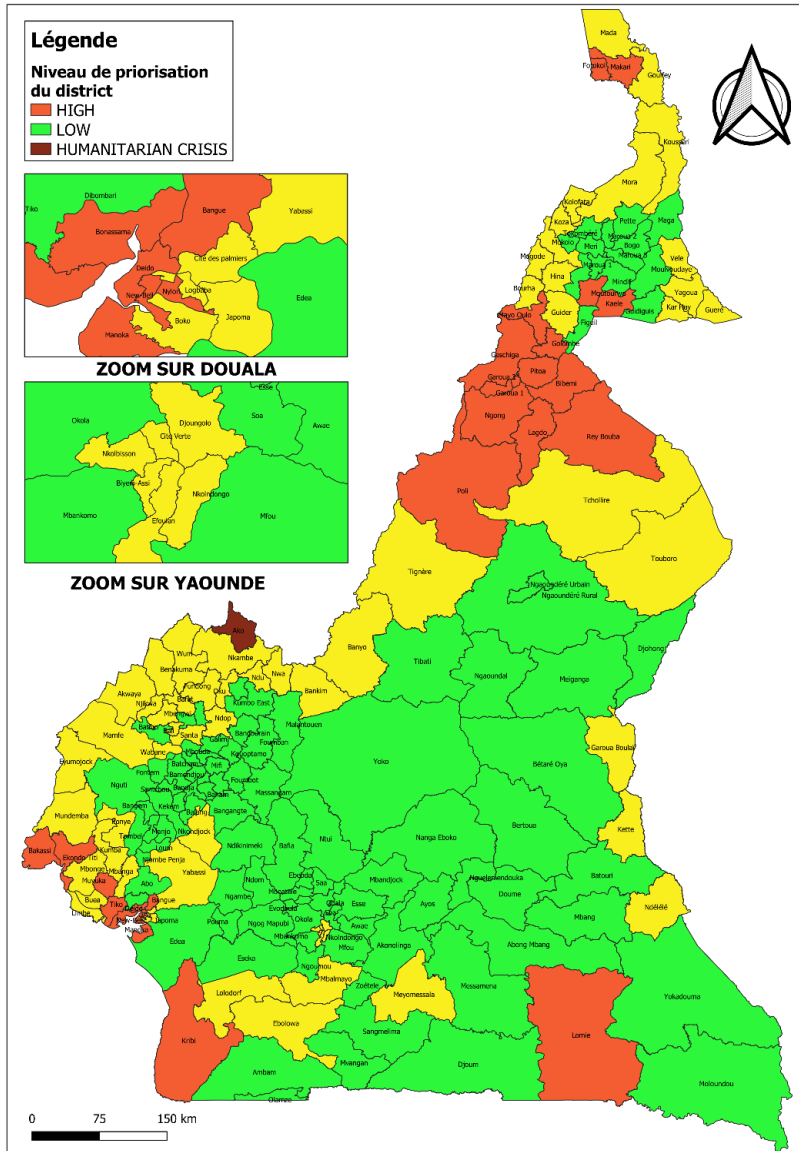


2020



2021

HOTSPOTS CARTOGRAPHY'S RESULTS, MARCH 2022



**HIGH PRIORITY: 28 DS
(DS Ako: Crise humanitaire)**

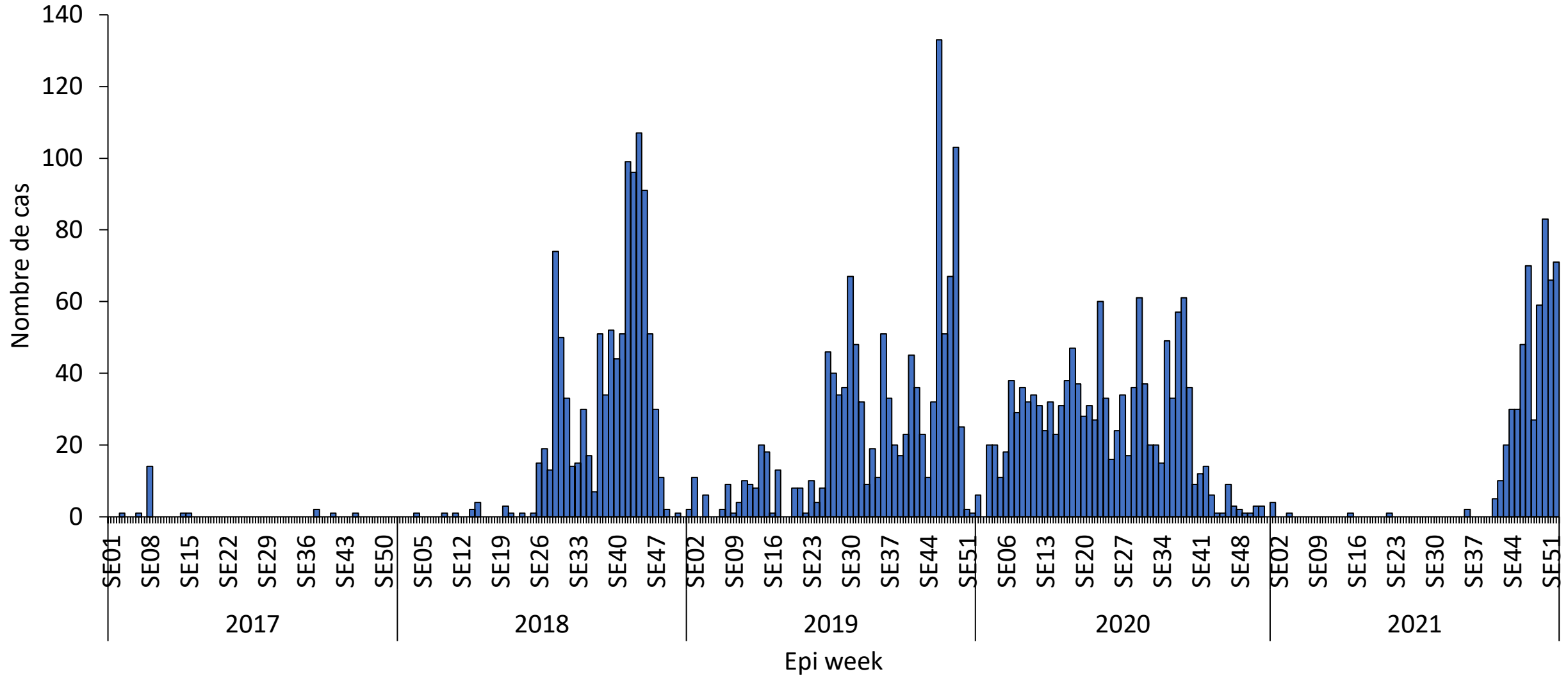
MODERATE PRIORITY: 63 DS

LOW PRIORITY: 99 DS

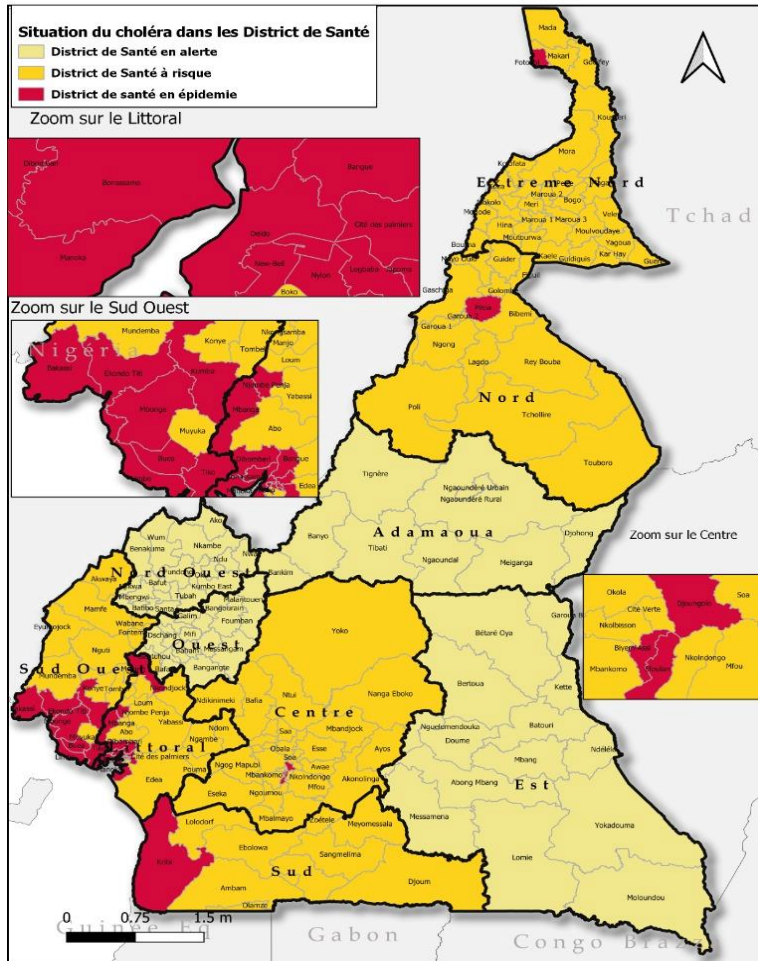
Challenges:

- Regions initially without cholera are now in active outbreak (South West)

Evolution des cas de choléra notifiés dans la Région du Sud Ouest de 2017 à 2021



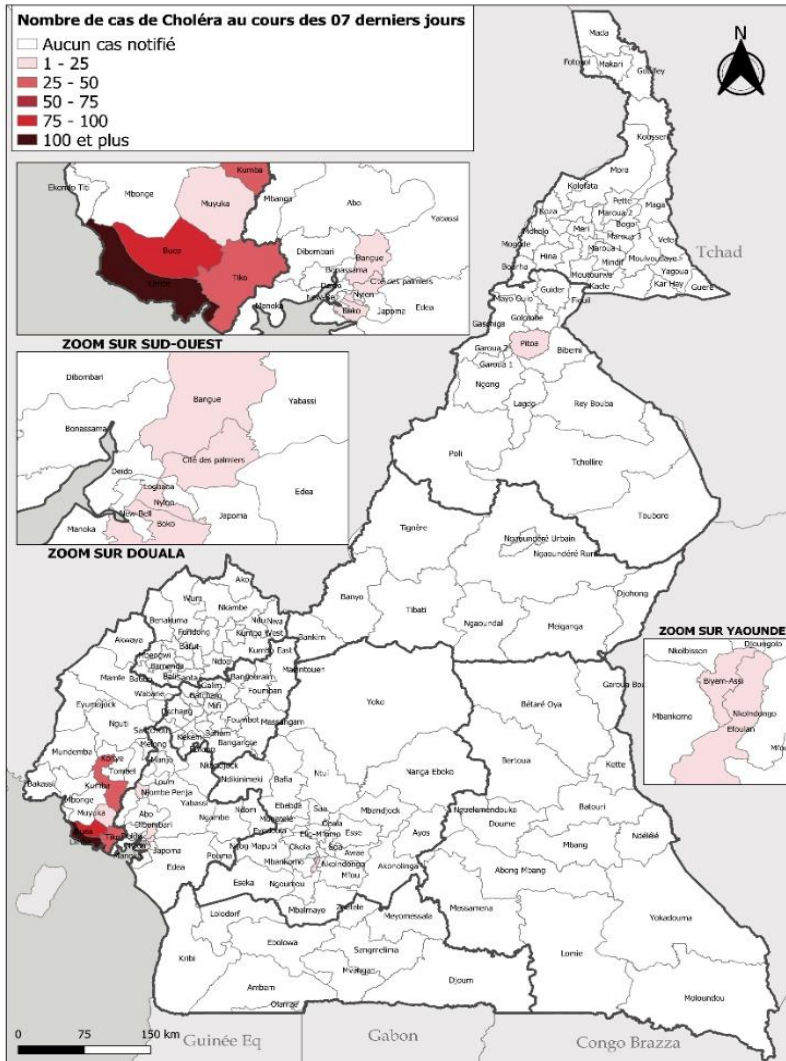
CURRENT CHOLERA SITUATION, APRIL 15TH, 2022



- Aucun nouveau district de santé en épidémie à la 15^{ème} Semaine Épidémiologique.
- Epidémie en cours dans la prison central de New Bell
- **549 Nouveaux Cas 08 Décès enregistrés :**
 - Région du Littoral **216 Cas 05 décès 01 Cas**
 - région du Nord **05 Cas**
 - Région du Sud-Ouest **327 cas 01 décès**
 - Région du Sud **01 Cas**

Figure 1 : Districts de Santé actifs dans les régions affectées au 15 Avril 2022

CURRENT CHOLERA SITUATION, APRIL 15TH, 2022



05 Régions actives (Centre, Littoral, Sud, Sud-Ouest, Nord)

30 Districts de Santé touchés

23 Districts de Santé actifs

5448 cas notifiés

182 cas confirmés par culture (3,3%)

114 décès enregistrés

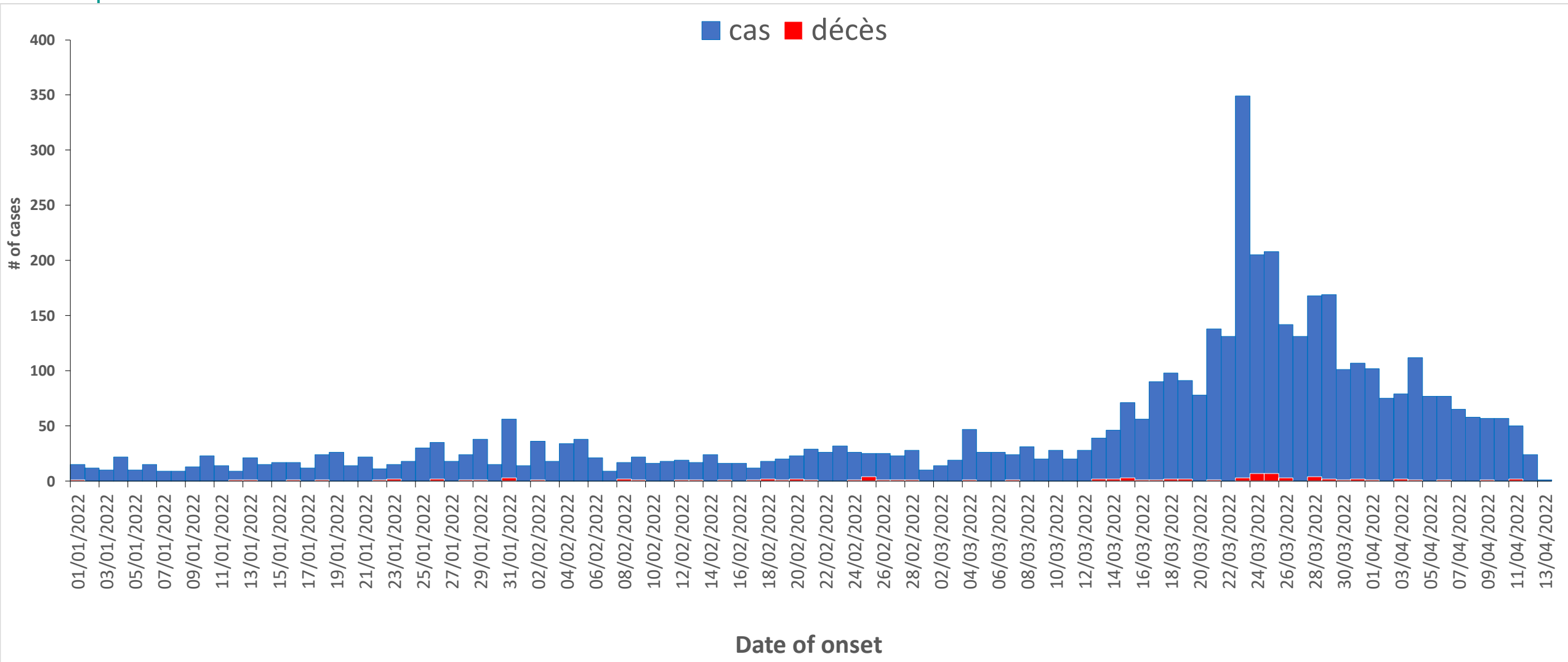
Taux de létalité : **2,1 %**

Age médian : **25 ans (0,2-89 ans)**

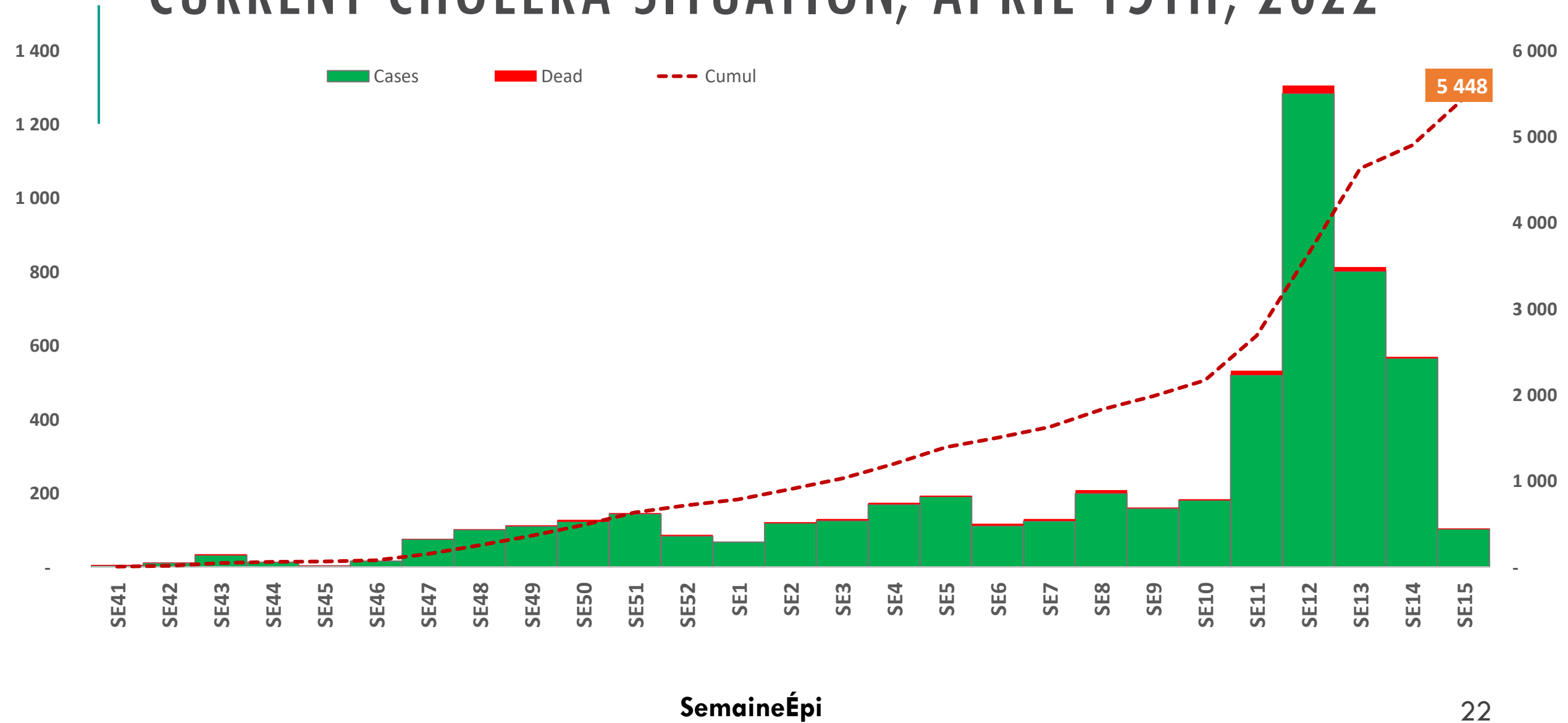
Sexe ratio : H/F **2 :1**

Figure 2: Districts de Santé touchés dans les régions affectées au 14 Avril 2022

CURRENT CHOLERA SITUATION, APRIL 15TH, 2022



CURRENT CHOLERA SITUATION, APRIL 15TH, 2022



CURRENT CHOLERA SITUATION, APRIL 15TH, 2022

Derniers foyers actifs		Date de la dernière notification	Nombre de jours sans notification de cas
Région	Dernier district ayant notifié		
Centre	EFOULAN	12/03/2022	02
Littoral	NJOMBE_PENJA	13/04/2022	01
Nord	Pitoa	08/04/2022	06
Sud	Kribi	06/04/2022	08
Sud-Ouest	Limbé	12/04/2022	02



Foyers actifs



Foyers en alerte

NO POTABLE WATER SUPPLY



Picture: Example of dwelling on stilts houses without a source of potable water

Picture 2: Evacuation of patients with cholera

THANK YOU TO PARTNER AND STRONG LEADERSHIP





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CHOLERA CONTROL

THANK YOU |