



GLOBAL TASK FORCE ON  
**CHOLERA CONTROL**

# CHOLERA SURVEILLANCE IN HAITI OCTOBER 2022- MAY 2024

Ministry of Public Health and  
Population (MSPP), Haiti  
Department of Epidemiology,  
Laboratories and Research (DELR)

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9<sup>th</sup> GTFCC Surveillance Meeting  
May 21-22-23, 2024

# PLAN

- Resurgence of cholera in Haiti: Reinforcing surveillance and the laboratory
- Cholera epidemiological situation, 2022-2024
- Use of surveillance
- Challenges
- Perspectives



# **RESURGENCE OF CHOLERA IN HAITI: STRENGTHENING EPIDEMIOLOGICAL SURVEILLANCE AND THE LABORATORY**

# HISTORY OF CHOLERA IN HAITI, OCTOBER 2022-MAY 2024

- October 2010, outbreak of the cholera epidemic in Haiti
- Until February 2019, more than 820,000 suspected cases and 10,000 deaths have been reported
- October 2022, resurgence of cholera in the country: a confirmed positive case for *Vibrio cholerae* O1, Ogawa in Savanne Pistache in the commune of Port au Prince
- Other cases have been confirmed in Cité Soleil and deaths have been reported
- MSPP's commitment to containing the outbreak

# HISTORY OF CHOLERA IN HAITI, OCTOBER 2022- MAY 2024

The Department of Epidemiology, Laboratories and Research (DELR), the entity responsible for the country's health security, must provide information to support the response:

- Setting up coordination for epidemic management
- Drawing up a response plan adapted to the current situation, in order to reduce cholera morbidity and mortality.
- Setting up a reporting system

From October 2022 to May 15, 2024, 83,765 suspected cases, 4,836 confirmed cases, 81,315 hospitalized cases, 1208 deaths (907 institutional and 301 community) have been notified

# SURVEILLANCE IMPLEMENTATION

## Keeping outbreaks under control

### Five pillars:

Case and death management

Alert management

Active case-finding and contact tracing

Epidemiological response

Health education

Monitoring and evaluation

# CASE AND DEATH MANAGEMENT

Case management is based primarily on early case detection.

## **Adopted case definition:**

**Suspect case:** Any person presenting with acute watery diarrhea, profuse with or without vomiting, with or without dehydration.

**Probable case:** Any suspected case with a positive rapid test result.

**Confirmed case:** Any suspect case with a positive culture for *Vibrio Cholerae* or presenting an epidemiological link with a confirmed case of cholera.

**Excluded case:** Any suspect or probable case with a negative culture for *Vibrio Cholerae*.

# CASE AND DEATH MANAGEMENT

Case management is based primarily on early case detection.

## Adopted case definitions

**Hospitalized case:** Any suspected or confirmed case who spends at least 24 hours in a care institution.

**Institutional death:** Any suspected or confirmed case who dies in a health-care institution.

**Community death:** Any suspected case who dies outside a care institution.

# CASE AND DEATH MANAGEMENT

## Level of reporting and/or notification of cases and deaths

### Community level

#### Who?

#### Informal :

Community leaders

Media

Others

#### Formal :

ASCP

Casec/Asec

TEPAC

Civil Protection volunteers

Red Cross volunteers

NGO

# CASE AND DEATH MANAGEMENT

## Level of reporting and/or notification of cases and deaths

### Community level

#### Who?

#### Formal :

- Departmental call center (managed by departmental coordination)
- Immediate telephone contact with superiors:
- ASCP → health institutions → departmental departments (epidemiologist)
- TEPAC → DINEPA departmental focal point

# CASE AND DEATH MANAGEMENT

## Level of reporting and/or notification of cases and deaths

### Institutional level

- ❖ Systematic completion of the standard register (electronic and paper) of acute watery diarrhoea by the Epidemiological Surveillance Officer (OSE) and/or a sentinel.
- ❖ Systematic completion of the investigation/notification form for deaths associated with suspected cases
- ❖ Regular completion of the wall chart of pathologies under epidemiological surveillance

# CASE AND DEATH MANAGEMENT

## Level of reporting and/or notification of cases and deaths

### Institutional level

On-site training of staff in the use of acute diarrhea registers

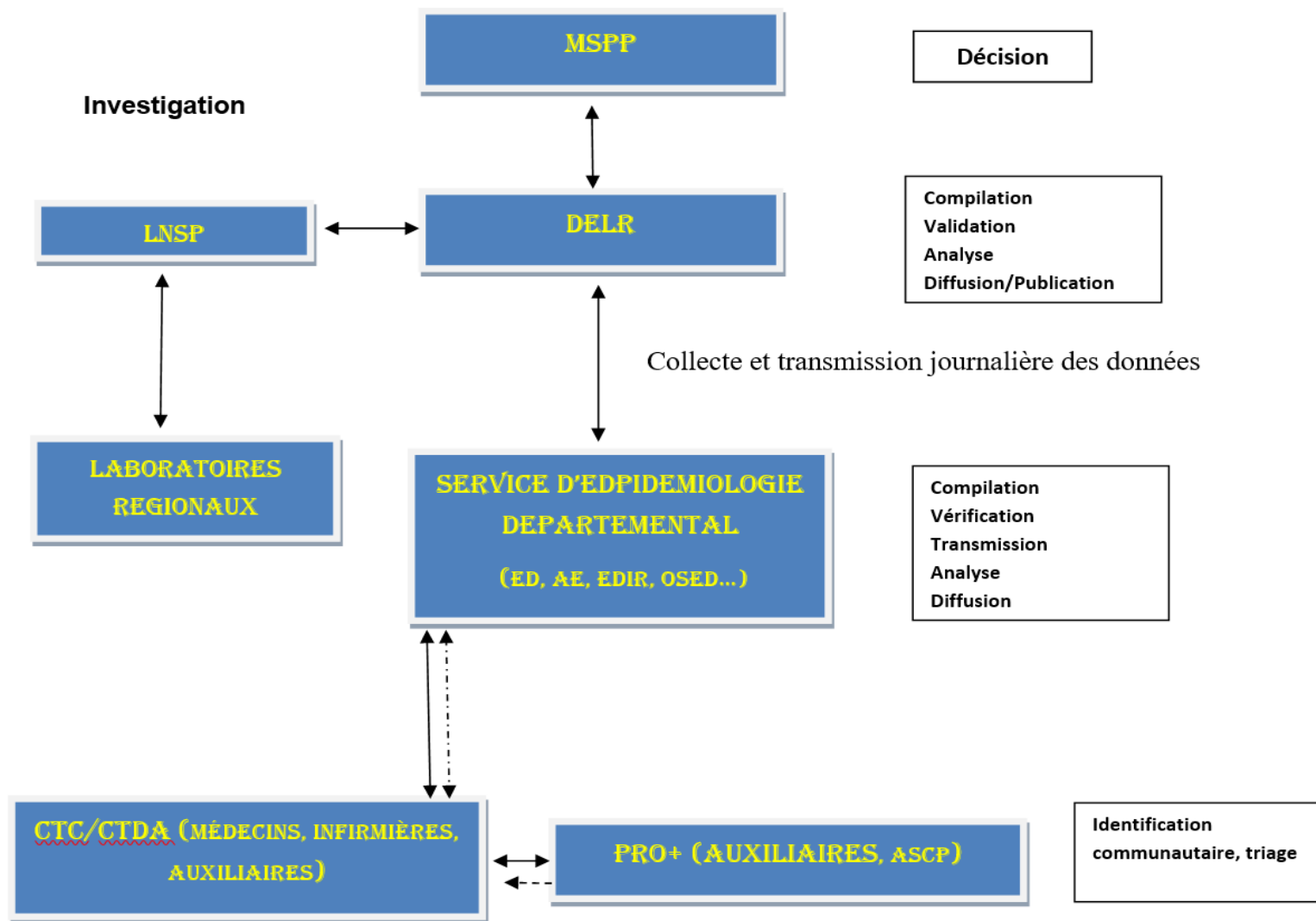
Immediate notification of all suspected cholera cases and deaths

Suspected cases, hospitalized cases, institutional deaths, community deaths entered on electronic platform (DHIS2)→ to departmental and central level



# CASE AND DEATH MANAGEMENT

## Flow of information



# CASE AND DEATH MANAGEMENT

- Analysis of information reported mainly at departmental and central level: preparation of national and departmental situation reports (SITREP)
- Regular dissemination for action planning, orientation of response activities
- Sharing at situation room level (national and departmental)

# ALERT MANAGEMENT

## Alert criteria

### ➤ Red alert:

≥ 10 suspected cases

≥ 1 culture-confirmed case

≥ 1 suspected death

### ➤ Orange alert: :

Rumor

Red alert the week before

# ALERT MANAGEMENT

## **Alert criteria**

➤ No alert :

No criteria above for at least 4 weeks

Blank, no data

# ALERT MANAGEMENT

**All alerts must be investigated within 48 hours of identification.**

**Investigation**, concomitant with response, will be carried out by Departmental level Epidemiology and Statistics Department (Departmental Epidemiologist (ED), Assistant Epidemiologist (AE), Departmental Investigation and Response Team (EDIR))

- DINEPA Emergency Focal Point
- Partner NGO(s)

*Communal level*

ASCP

TEPAC

Central level provide assistance as needed

# ALERT MANAGEMENT

## Any investigation of a cholera alert must:

- Verify the outbreak by register analysis
- Collect stool samples on Carry-Blair for subsequent confirmation by culture
- Analyze the origin of cases to identify affected localities
- Count cases and deaths with active contact tracing
- Identify presumptive source of contamination: index case, funeral, watering hole
- Identify community risk factors in terms of access to water and sanitation
- Collection of water used in the community

# ACTIVE CASE-FINDING AND CONTACT TRACING

- Identification of the origin of cases in the institutional register
- Active search for contacts and other similar cases by EDIR and ASCP through home visits
- Search for community deaths
- Access to difficult areas (for referral to CTDA and/or PRO+)

# EPIDEMIOLOGICAL RESPONSE

- Focuses on activities aimed at cutting the chain of transmission, mainly in the community
- Is carried out mainly by the Departmental Investigation and Response Teams (EDIR), accompanied by communal teams and ASCPs supported by partners, within no more than 48 hours.
- Institutional and community-based, adapted as needed

# HEALTH EDUCATION

- Awareness-raising sessions
- Early access to care
- Reminder of hygiene measures

# MONITORING AND EVALUATION

- Sharing of response activity reports
- Daily meetings held by departments with EDIRs and partners involved in the response.
- Strategy review/adjustment
- Regular meetings (weekly, monthly) between DELR and departments, partners involved to discuss surveillance-response performance
- Weekly sharing of a summary of alert and response activities

# LABORATORY SURVEILLANCE

- ❖ Strengthening of culture and PCR testing at the National Public Health Laboratory (LNSP)
- ❖ Collection of suspected cases from institutions and the community
- ❖ Transport of specimens to drop-off points or to the national laboratory
- ❖ Testing of water specimens

# LABORATORY SURVEILLANCE

A strategy that pays off: Use of Labo moto personnel

To support epidemiological surveillance in collecting and transporting samples

Profiles: nurses and lab technicians, recruited and trained

Present in all ten (10) departments

Equipped with materials and inputs

Usually travel by motorcycle, hence the name



# LABORATORY SURVEILLANCE

Use of rapid tests in community activities by the EDIR and/or the Labo moto staff

Training of EDIR and Labo moto personnel in the use of rapid tests by LNSP



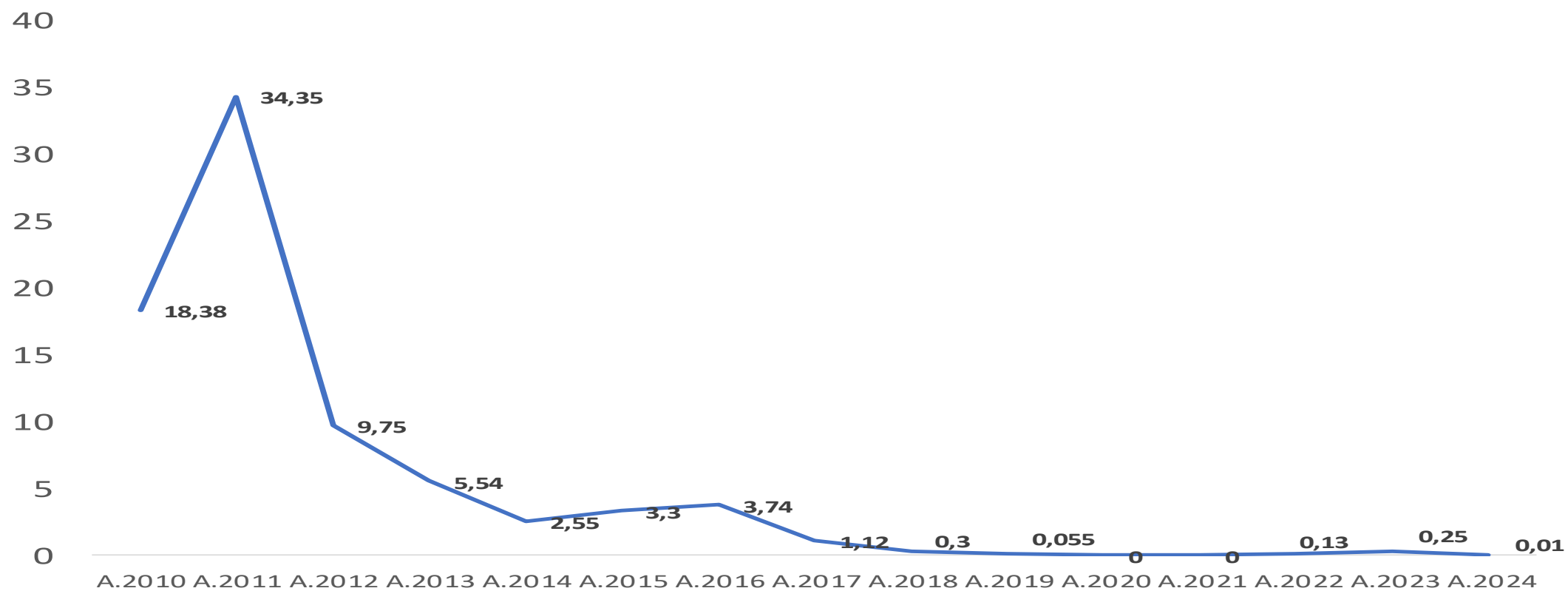


# CHOLERA EPIDEMIOLOGICAL SITUATION, 2022-2024

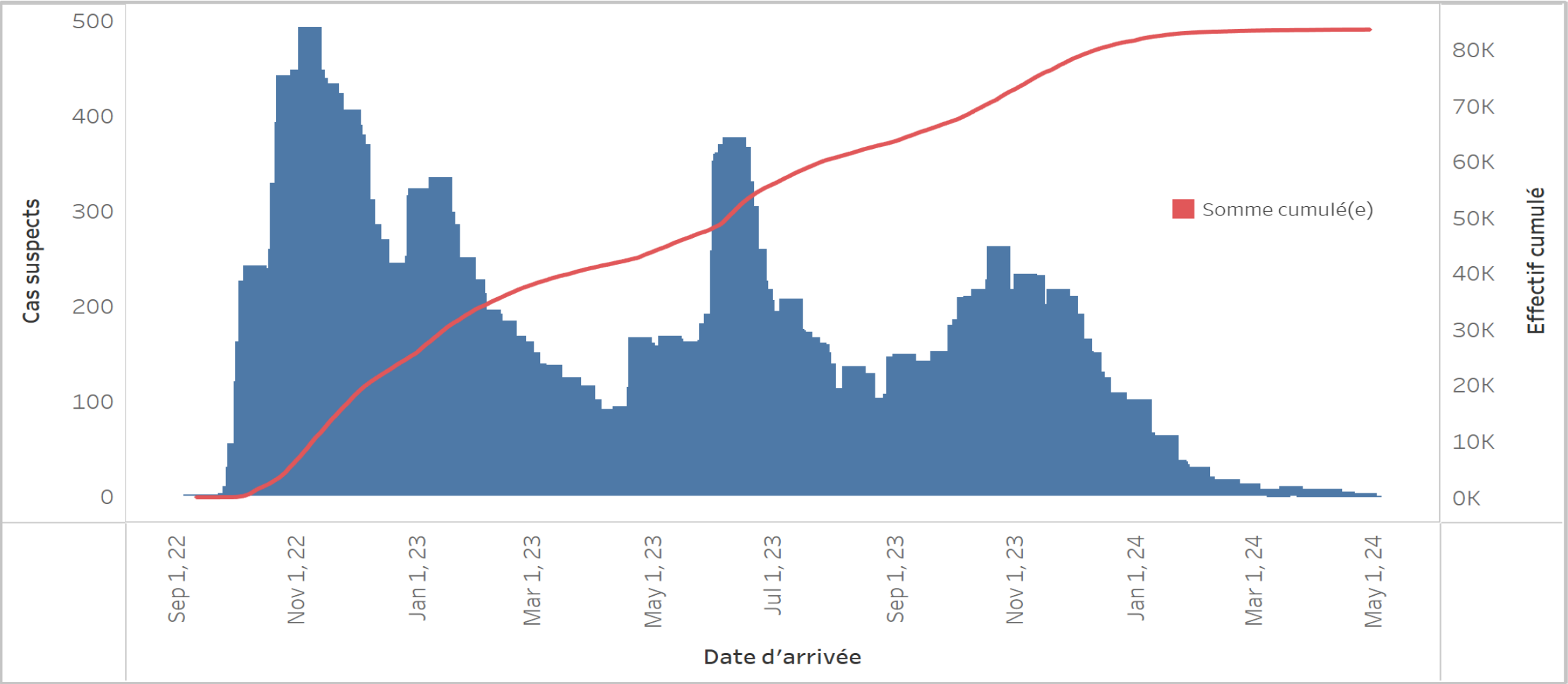
# GLOBAL SITUATION

| Year | Population | Suspected Cases | Confirmed cases | Hospitalized Cases | Institutional Deaths | Communtiy Deaths | Total of Deaths | Incidence rate per 1000 hbt |
|------|------------|-----------------|-----------------|--------------------|----------------------|------------------|-----------------|-----------------------------|
| 2010 | 10085214   | 185351          |                 |                    | 2521                 | 1580             | 4101            | 18.38                       |
| 2011 | 10248306   | 352033          |                 |                    | 1950                 | 977              | 2927            | 34.35                       |
| 2012 | 10413211   | 101503          |                 |                    | 597                  | 311              | 908             | 9.75                        |
| 2013 | 10579230   | 58574           |                 |                    | 403                  | 184              | 587             | 5.54                        |
| 2014 | 10745665   | 27392           |                 |                    | 209                  | 88               | 297             | 2.55                        |
| 2015 | 10911819   | 36045           |                 |                    | 224                  | 98               | 322             | 3.30                        |
| 2016 | 11078033   | 41421           |                 |                    | 307                  | 140              | 447             | 3.74                        |
| 2017 | 11244774   | 13681           |                 |                    | 110                  | 49               | 159             | 1.12                        |
| 2018 | 11411527   | 3777            |                 |                    | 20                   | 21               | 41              | 0.30                        |
| 2019 | 11577779   | 720             |                 |                    | 2                    | 1                | 3               | 0.055                       |
| 2020 | 11743017   | 83              |                 |                    | 0                    | 0                | 0               | 0.00                        |
| 2021 | 11887456   | 13              |                 |                    | 1                    | 0                | 1               | 0.00                        |
| 2022 | 12033672   | 22411           | 1561            | 20693              | 274                  | 176              | 450             | 0.13                        |
| 2023 | 12181684   | 54767           | 3058            | 54139              | 602                  | 109              | 711             | 0.25                        |
| 2024 | 13240933   | 5917            | 138             | 5801               | 31                   | 16               | 47              | 0.01                        |

# INCIDENCE RATE PER 1000 HBTS, 2010-2024



# CHOLERA IN HAITI, OCTOBER 2022 - MAY 2024



# CHOLERA SITUATION BY DEPARTMENT, HAITI, OCTOBER 2022-MAY\* 2024

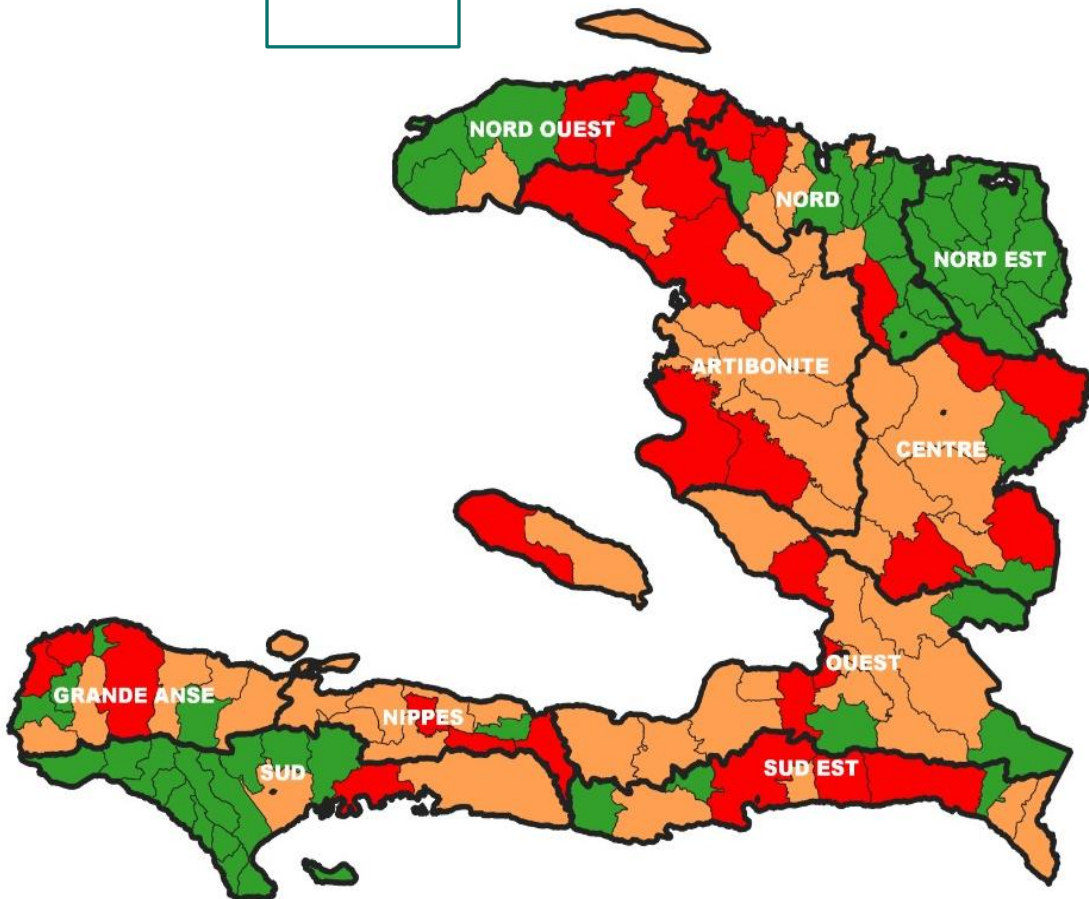
| Department | Suspected cases | Confirmed Cases | Hospitalized Cases | Institutional Deaths | Community Deaths | Total Deaths |
|------------|-----------------|-----------------|--------------------|----------------------|------------------|--------------|
| Artibonite | 19253           | 531             | 19114              | 141                  | 55               | 196          |
| Centre     | 18876           | 918             | 18667              | 90                   | 30               | 120          |
| Grand Anse | 920             | 111             | 822                | 61                   | 11               | 72           |
| Nippes     | 898             | 69              | 633                | 116                  | 26               | 142          |
| Nord       | 2264            | 98              | 2209               | 85                   | 13               | 98           |
| Nord-Ouest | 908             | 82              | 879                | 31                   | 7                | 38           |
| Nord-Est   | 881             | 49              | 669                | 35                   | 8                | 43           |
| Ouest      | 37955           | 2693            | 19774              | 291                  | 127              | 418          |
| Sud        | 629             | 83              | 802                | 30                   | 2                | 32           |
| Sud-Est    | 511             | 123             | 756                | 27                   | 22               | 49           |
| Haïti      | 83095           | 4757            | 45442              | 907                  | 301              | 1208         |

# CHOLERA SITUATION BY DEPARTMENT, HAITI, JANUARY-MAY\* 2024

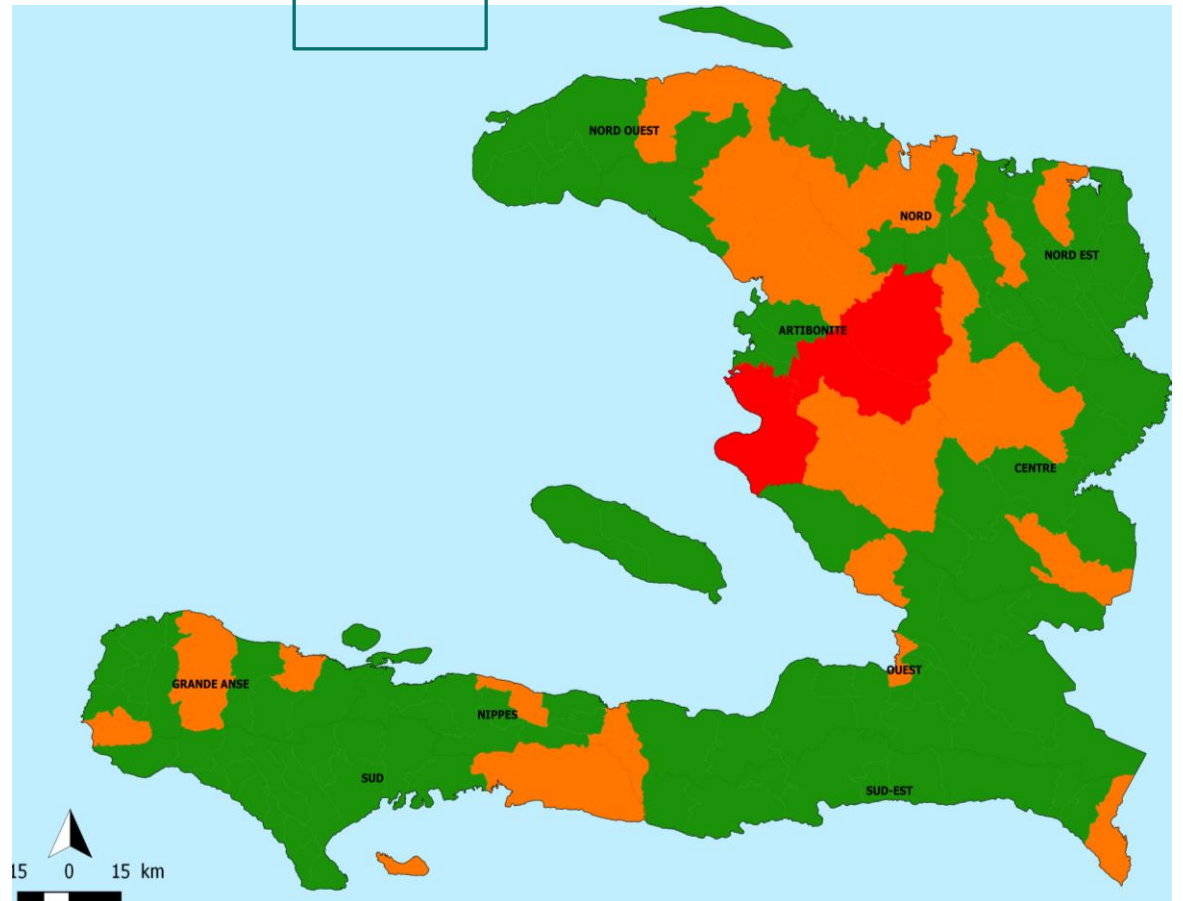
| Department | Suspected cases | Confirmed Cases | Hospitalized Cases | Institutional Deaths | Community Deaths | Total Deaths |
|------------|-----------------|-----------------|--------------------|----------------------|------------------|--------------|
| Artibonite | 1468            | 14              | 1446               | 9                    | 14               | 23           |
| Centre     | 1219            | 4               | 1209               | 1                    | 1                | 2            |
| Grand Anse | 339             | 34              | 332                | 3                    | 0                | 3            |
| Nippes     | 235             | 21              | 229                | 4                    | 0                | 4            |
| Nord       | 656             | 0               | 648                | 4                    | 0                | 4            |
| Nord-Ouest | 234             | 17              | 230                | 1                    | 0                | 1            |
| Nord-Est   | 490             | 3               | 486                | 1                    | 1                | 2            |
| Ouest      | 841             | 30              | 800                | 5                    | 0                | 5            |
| Sud        | 277             | 4               | 268                | 1                    | 0                | 1            |
| Sud-Est    | 158             | 11              | 153                | 2                    | 0                | 2            |
| Haïti      | 5917            | 138             | 5801               | 31                   | 16               | 47           |

# MAPPING ALERTS, HAITI, 2022-2024

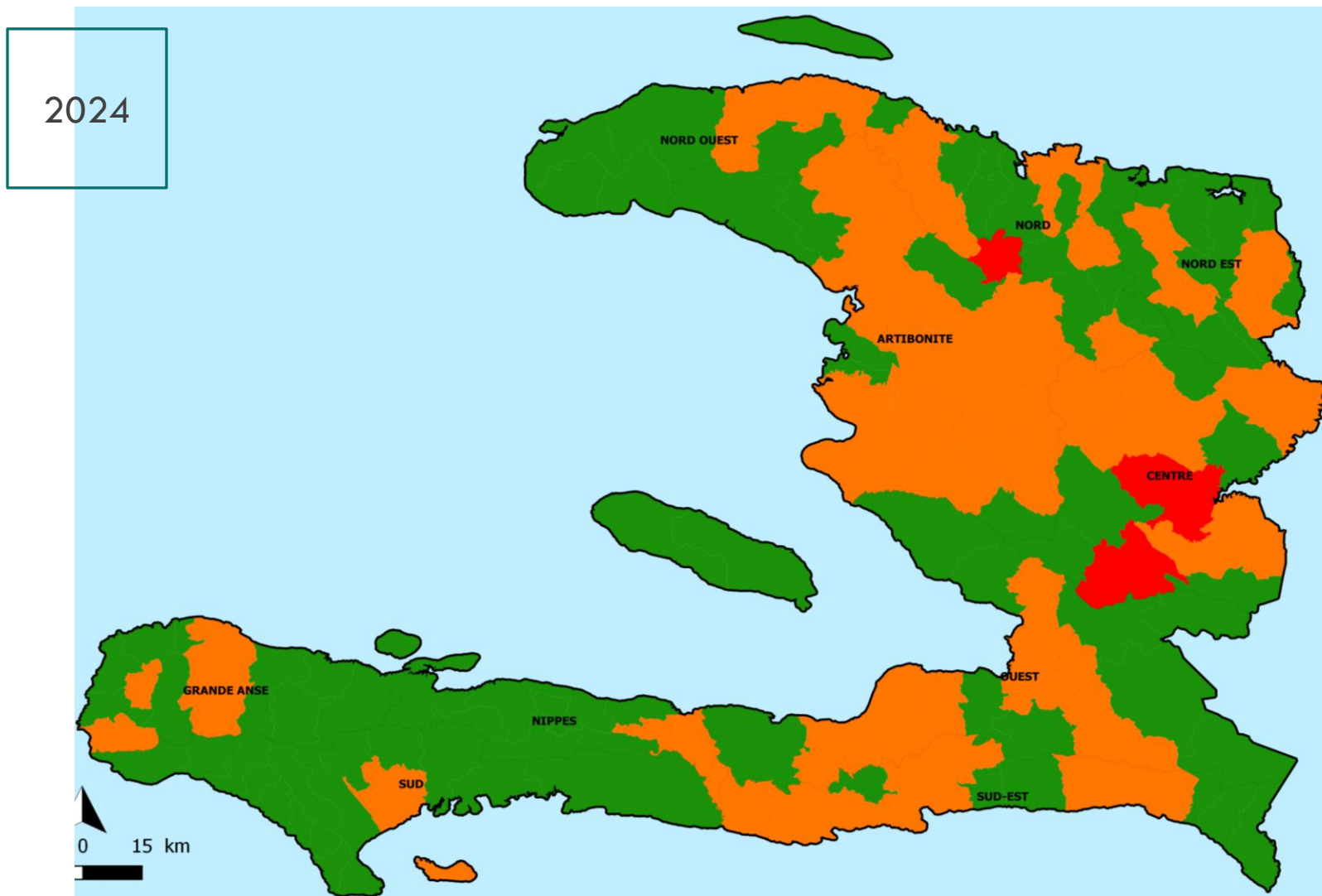
2022



2023



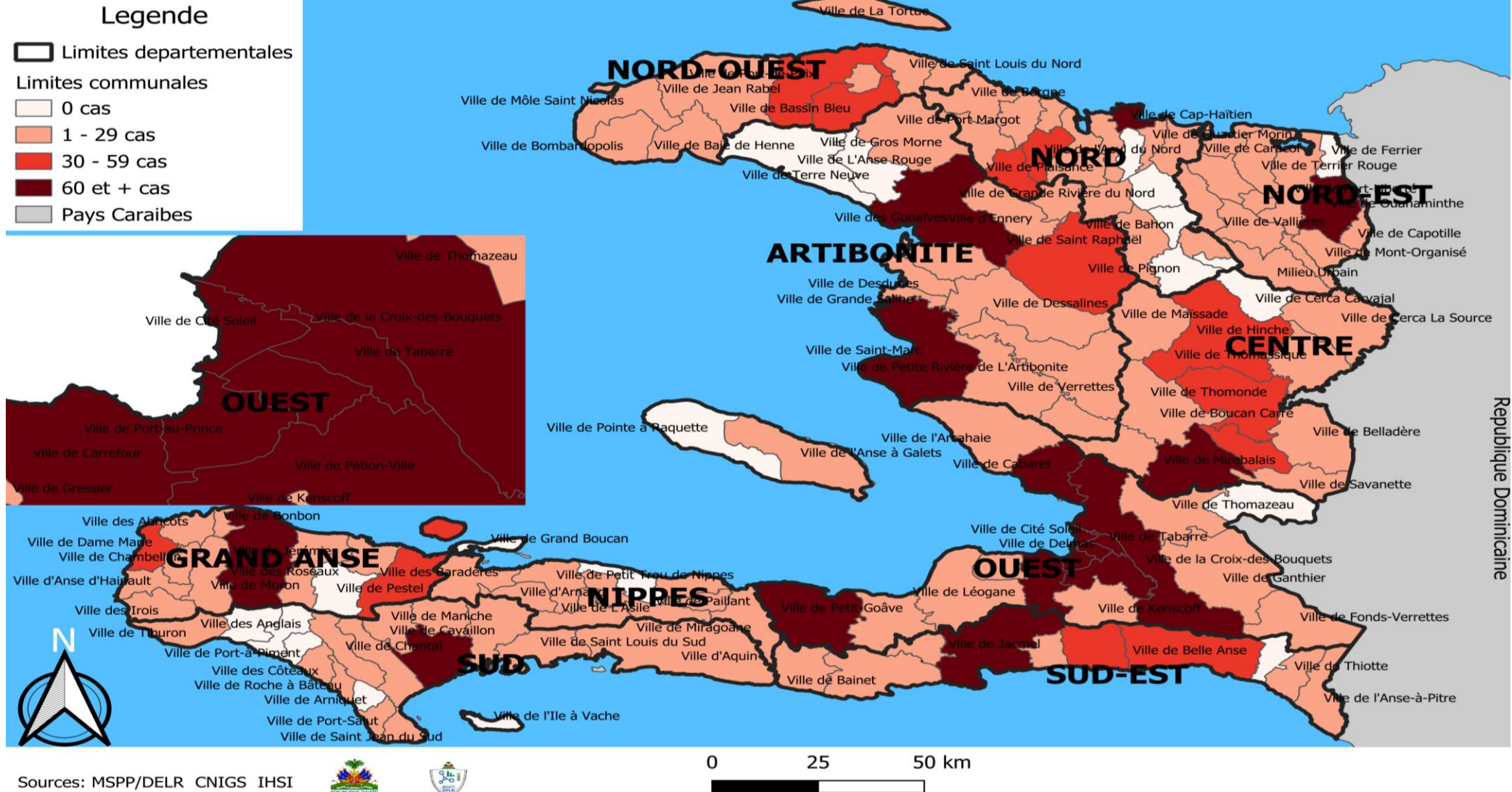
# MAPPING ALERTS, HAITI, 2022-2024



# ANNUAL DISTRIBUTION OF CASES TESTED, CONFIRMED AND POSITIVE, BY DEPARTMENT, HAITI, 2022-2024

| Département de résidence |                    | 2022   | 2023   | 2024   | Total générale |
|--------------------------|--------------------|--------|--------|--------|----------------|
| Artibonite               | Cas testés         | 272    | 776    | 73     | 1,121          |
|                          | Cas Positif        | 58     | 247    | 22     | 327            |
|                          | Taux de positivité | 21.32% | 31.83% | 30.14% | 29.17%         |
| Centre                   | Cas testés         | 531    | 1,280  | 131    | 1,942          |
|                          | Cas Positif        | 237    | 309    | 26     | 572            |
|                          | Taux de positivité | 44.63% | 24.14% | 19.85% | 29.45%         |
| Grand'Anse               | Cas testés         | 185    | 924    | 96     | 1,205          |
|                          | Cas Positif        | 21     | 357    | 37     | 415            |
|                          | Taux de positivité | 11.35% | 38.64% | 38.54% | 34.44%         |
| Nippes                   | Cas testés         | 170    | 569    | 68     | 807            |
|                          | Cas Positif        | 34     | 118    | 18     | 170            |
|                          | Taux de positivité | 20.00% | 20.74% | 26.47% | 21.07%         |
| Nord                     | Cas testés         | 157    | 549    | 19     | 725            |
|                          | Cas Positif        | 52     | 200    | 2      | 254            |
|                          | Taux de positivité | 33.12% | 36.43% | 10.53% | 35.03%         |
| Nord-Est                 | Cas testés         | 59     | 849    | 14     | 922            |
|                          | Cas Positif        | 0      | 265    | 3      | 268            |
|                          | Taux de positivité | 0.00%  | 31.21% | 21.43% | 29.07%         |
| Nord-Ouest               | Cas testés         | 89     | 351    | 29     | 469            |
|                          | Cas Positif        | 11     | 128    | 16     | 155            |
|                          | Taux de positivité | 12.36% | 36.47% | 55.17% | 33.05%         |
| Ouest                    | Cas testés         | 2,485  | 3,194  | 436    | 6,115          |
|                          | Cas Positif        | 1,093  | 944    | 49     | 2,086          |
|                          | Taux de positivité | 43.98% | 29.56% | 11.24% | 34.11%         |
| Sud                      | Cas testés         | 131    | 611    | 61     | 803            |
|                          | Cas Positif        | 22     | 188    | 13     | 223            |
|                          | Taux de positivité | 16.79% | 30.77% | 21.31% | 27.77%         |
| Sud-Est                  | Cas testés         | 153    | 660    | 58     | 871            |
|                          | Cas Positif        | 69     | 271    | 26     | 366            |
|                          | Taux de positivité | 45.10% | 41.06% | 44.83% | 42.02%         |
| Total général            | Cas testés         | 4,232  | 9,763  | 985    | 14,980         |
|                          | Cas Positif        | 1,597  | 3,027  | 212    | 4,836          |
|                          | Taux de positivité | 37.74% | 31.00% | 21.52% | 32.28%         |

# MAPPING OF CONFIRMED CASES, HAITI, 2022-2024





# USE OF THE SURVEILLANCE

In the current context, surveillance has played a central role in the response through :

- The rapid revision of guidelines by DELR to guide epidemiological surveillance in the 10 departments. The rapid development of operational response plans enabled effective activities to be carried out with the support of partners
- The implementation of an efficient data management system for the collection and analysis of data and the sharing of updated information in the form of daily SITREPs at central level and in all departments. This has enabled the various stakeholders to improve the planning of activities (vaccination, wash...)
- Early detection of cases through Community-based Epidemiological Surveillance (SEBAC)
- The coordination of response activities in the departments has been entrusted to the surveillance teams (EDIR). Before intervening in an outbreak, the teams had a clearer idea of the location and types of activities to be carried out
- Monitoring the effectiveness of the response carried out in the households through the OSE and ASCP network.

# SPECIAL SITUATION: PPDI\*

July 2023: internal migration leading to the creation of camps for displaced people.

- Planning of interventions within PPDI
- Teams available within the department for all community actions
- Use of rapid tests for initial orientation of community response activities
- Use of syndromic data to guide hygiene and sanitation actions

\*PPDI: Points des Personnes en déplacement Interne



# CHALLENGES



The observed improvement remains fragile due to factors favorable to outbreaks, such as the rainy season and precarious hygiene conditions in populations and internally displaced persons camp (PPDI)

It is essential to keep all aspects of the response activated, including community involvement for early case detection, communication and prevention, as well as active epidemiological surveillance.

The biggest challenges are :

- 
- Maintaining high-quality intersectoral and multisectoral coordination
  - Strengthened community involvement for early detection of suspected cases, raising awareness of cholera prevention among at-risk populations and promoting good hygiene practices
  - Efficient data management to monitor epidemic trends and better orient the response
  - Maintaining active epidemiological surveillance to ensure rapid response to at least 95% of alerts within 48 hours, and rapid investigation and outbreak control activities around at least 90% of suspected cases and deaths

- A sound mechanism for managing specimens to the laboratory for culture confirmation is essential to move towards elimination
- The socio-political context
- Reduction in funds
- Massive departure of trained staff



# PERSPECTIVES

- 
- Continue with the establishment of operational teams down to the lowest level in order to minimize difficulties linked to the security context.
  - Strengthen supervision activities to ensure quality data feedback
  - Consolidate, as far as possible, sample collection and transport to the national or regional laboratories
  - Facilitate the acquisition of inputs to facilitate timely investigations and responses
  - Facilitate staff training/retraining at all levels

# Thank you

Together we can  
**#endcholera**



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