



Following the first cholera outbreak that took place in the country in October 2010 and the assessment phase that followed, the Haitian Ministry of Public Health and Population (MSPP, Ministère de la santé publique et de la population) published a National Plan for the Elimination of Cholera in Haiti (PNEC, Plan National d'Élimination du Choléra) intended to be implemented in three phases: a short-term phase from 2013 to 2015, a mid-term phase from 2016 to 2018, and a long-term phase from 2018 to 2022 which would result in eliminating the disease in the country.

## Key figures

**819 000** cholera cases since October 2010

**9 790** deaths since October 2010

Fatality rate: **1.2 %**

Almost **11** million euros allocated to SI since 2012

**16** response teams in 2018



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## 1 Governance and national strategy

The MSPP is in charge of implementing this plan via its ten departmental health directorates, whose services are also decentralised through Community Health Units (CHU). Their number and location are determined by the size of the covered population, their skills and their geographical situation. CHU are decentralised administrative entities in charge of conducting health activities, in their respective geographical areas, in partnership with public and private institutions and more particularly with the participation of the community.

Created in 2009, the National Directorate of Potable Water and Sanitation (known by its French acronym DINEPA) is in charge of implementing the government's water and sanitation policy. DINEPA develops and regulates the sector at national level and monitors the health actors.

Since 2013, many efforts have been undertaken by WaSH actors in order to strengthen the coordination at central and decentralised levels and to achieve the harmonisation of cholera response activities. MSPP and DINEPA have progressively stepped-up their collaboration since the beginning of the outbreak.

The PNEC focuses on four domains over a ten-year period (2013-2022): water and sanitation, health services and healthcare management, epidemiology and health promotion, and hygiene and nutrition. The second phase of the PNEC (mid-term 2016-2018) aimed at reaching an incidence rate below 0.1% in the country by the end of 2018, in other words less than 12,000 suspected cases per year.

The plan is composed of 3 strategic pillars:

1. Coordination and decision-making support
2. Access to preventive (vaccination) and curative care
3. Transmission prevention: alert-response mechanism, access to water and sanitation, health promotion.

Efforts were particularly focused on areas where the epidemic appeared to persist and spread.

Since 2013, PNEC's implementation has been supported financially by UNICEF, the Pan American Health Organisation (PAHO) and the French Government's Crisis and Support Center (CDC, Centre de Crise et de Soutien). From October 1<sup>st</sup> 2010 to June 30<sup>th</sup> 2018, over 700 million USD were allocated in support of this plan. UNICEF, more particularly, supports MSPP, the Direction Sanitaire (Health Directorate) and DINEPA in coordinating their response during outbreaks and in implementing preventive action plans through the National Coordination Body for the Fight Against Cholera (CNLCC, Coordination Nationale de Lutte contre le Choléra) within the MSPP. The other implementation partners are ACTED, ACF, Oxfam, French Red Cross, IFRC and SOLIDARITÉS INTERNATIONALES.

# 2 Context of the disease

Since October 2010 and the introduction of *Vibrio cholerae*<sup>1</sup> in the Centre department, more than 819,000 cholera cases have been identified. This includes more than 9,700 fatalities, with a global fatality rate of 1.12%. The disease's expansion was very rapid, even exceptionally so, notably due to the massive pollution of the Artibonite river. Almost 4,000 people died from the disease during the last trimester of 2010, then more than 2,900 people died in 2011, with a total number of cases reaching almost 252,000.

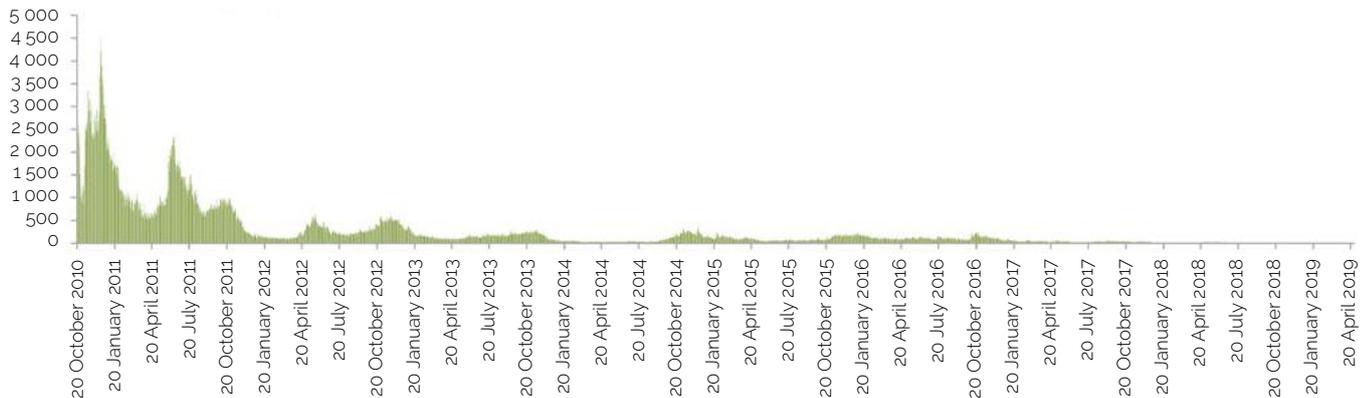
The country's modest size, the population density (>300 inhabitants/km<sup>2</sup>) and the improvement of transportation routes linking the country's main cities were transmission factors, that also played a very important role in enabling the constant circulation and spreading of the disease<sup>2</sup>.

<sup>1</sup> The outbreak is attributed to *Vibrio cholerae* serogroup O1, serotype Ogawa, biotype El Tor.

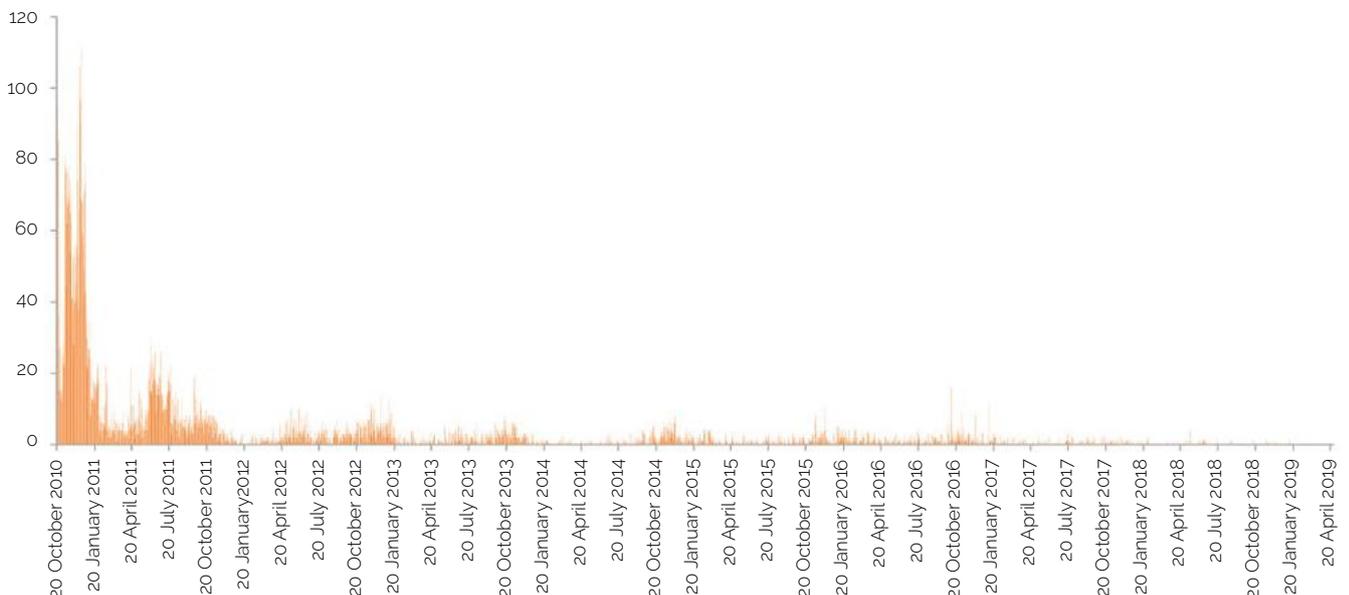
<sup>2</sup> MSPP and DINEPA, *National Plan for the Elimination of Cholera in Haiti – Mid-term development, 2016*.

## A GLOBAL VIEW, HAITI SINCE 2010

**Number of suspected cholera cases per day in Haiti from October 2010 to April 2019**



**Number of cholera related fatalities per day in Haiti from October 2010 to April 2019**



During the drafting of PNEC's mid-term phase in 2016, 8 towns were considered cholera hotspots and Type A priority areas (source areas that have been on red alert at least 50% of the time every week since 2014, and that spread the disease to the surrounding municipalities). They are mainly located in the Centre and Artibonite departments: Hinche, Mirebalais, Gonaïves, Saint-Marc, Le Cap, Cabaret, Croix des Bouquets and Carrefour. During low transmission seasons, cases persist in these areas before spreading towards the neighbouring towns. In the Port-au-Prince Metropolitan Area (ZMPP, Zone Métropolitaine de Port-au-Prince), where SI has a significant presence, there is a persistent but low transmission rate (excluding outbreaks) oscillating between 10 and 30 suspected cases per day, within a set of disparate neighbourhoods.

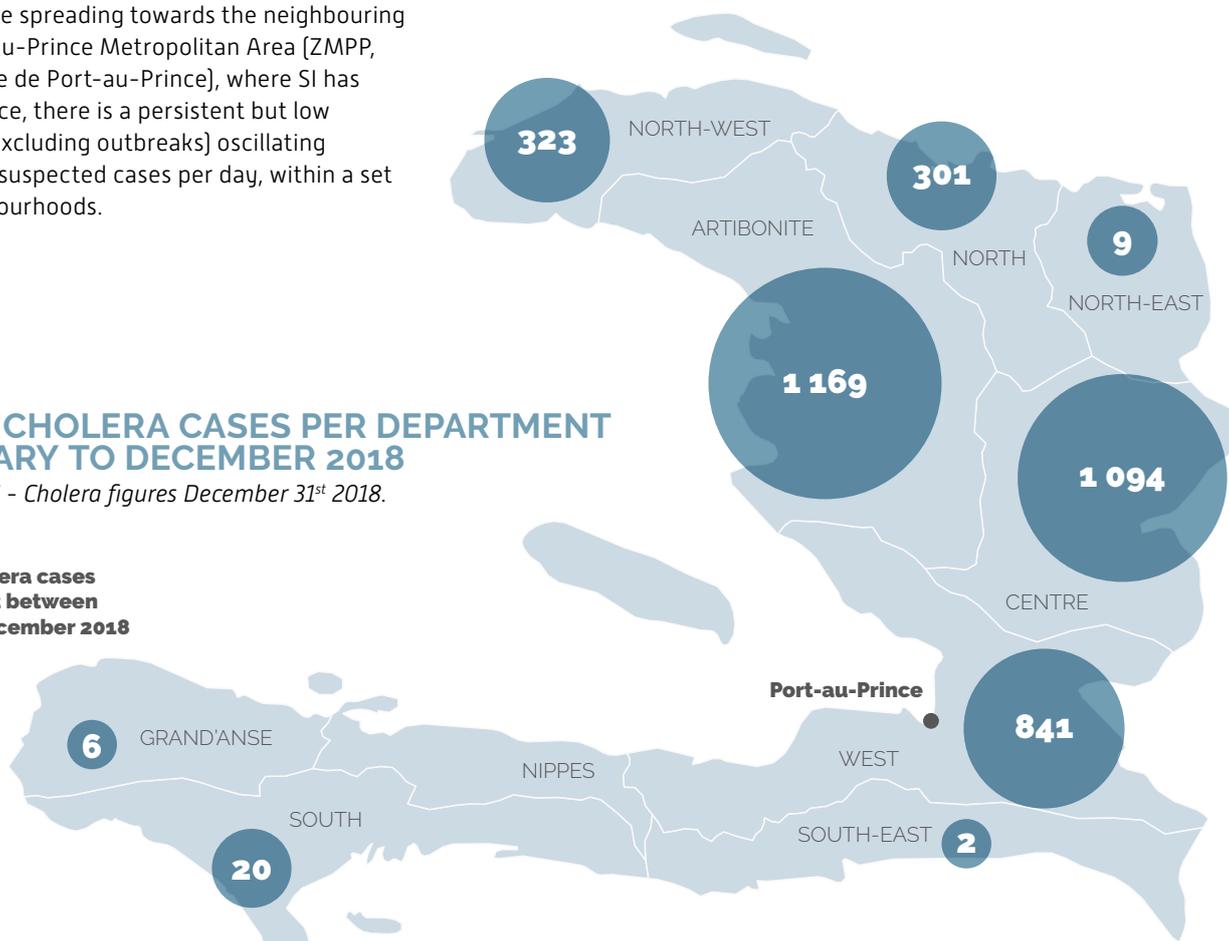
According to MSPP, since January 2018:

- a **suspected case** is when a person is suffering from acute watery diarrhea and showing signs of dehydration;
- a **confirmed case** is a case for which a stool or vomit sample has been collected then analysed in a laboratory, presenting positive culture results with *Vibrio cholerae* O1 Inaba or Ogawa.

## SUSPECTED CHOLERA CASES PER DEPARTMENT FROM JANUARY TO DECEMBER 2018

Source: OCHA - Haiti - Cholera figures December 31<sup>st</sup> 2018.

**Suspected cholera cases per department between January and December 2018**



## 3 Context of intervention

Haiti's population is almost 11 million<sup>3</sup>, with more than 55% of the population living in urban areas in 2018, including 2.6 million in Port-au-Prince<sup>4</sup>.

Haiti's extreme vulnerability to waterborne diseases is due to the country's very poor global sanitation conditions (and is probably under-estimated). In 2012, 31% of the population did not have access to drinkable water and 83% did not have access to an improved faecal waste disposal installation<sup>5</sup>.

In parallel, 46% of the Haitian population does not have direct access to healthcare, not counting the fact that most of the population lacks good hygiene practices<sup>6</sup>.

These numbers do not reflect the deep gap there is between rural and urban areas: access to water rates reaches 75% in urban areas, versus 47% in rural areas. As for access to sanitation, the numbers are 55% and 16% respectively<sup>7</sup>.

<sup>3</sup> World Bank data for 2017.

<sup>4</sup> CIA data for 2018.

<sup>5</sup> 2012 common WHO/UNICEF program report.

<sup>6</sup> Ibid.

<sup>7</sup> World Bank, Haitian government and United Nations, Haiti: Clean water, improved sanitation, better health, conference report, October 9<sup>th</sup> 2014.

# 4 Epidemiological surveillance system

**A**t national level, the MSPP Decentralisation Support Unit (UADS/ MSPP) declares the outbreak at national level and implements the country strategy. The departmental Health Directorates take over the response management. In each department, a cholera coordinator under the MSPP's authority is linked to the Health Directorate; one of his/her missions is epidemiological surveillance with the support of a departmental epidemiologist.

A monitoring system is set-up in acute diarrhea treatment centers (ADTC) and communities in order to alert the response teams whenever a case is suspected. ADTCs then give notice of these cases – seen, hospitalised or suspected cholera-related deaths – through the maintenance of registers that include minimal information concerning these cases. Confirmation through lab culture is made by the National Public Health Laboratory. Watchmen in ADTCs convey this information to response teams, thus allowing them to be more reactive and efficient.

At community level, surveillance is taken care of by IFRC, French and Haitian Red Crosses and community agents. The latter are key persons from the community who are in charge of conveying information, but who are not necessarily part of the healthcare system. These various actors must alert the response teams whenever:

- there are rumors concerning one or more fatalities caused by diarrhea;
- there are rumors, or grouped cases of proved acute diarrheas in an area or in a household;
- there is a case of diarrhea reported by the population, perceived as suspected cholera.

These alerts are transmitted by phone (calls, or WhatsApp-type groups) to SI response teams or to the Health Directorates; in this last case, the cholera coordinator then sends the information to the response teams.

It is requested from drinkable water, sanitation and hygiene (WaSH) actors to intervene on all suspected cases, even in case of negative cholera diagnostic results.





## 5 SI approach and methodology

**T**he cholera response in Haiti is divided into two parts. The health component includes the treatment of patients in a specialised centre (ADTC) by health actors. The investigation component includes collecting information from the patient by health actors in a specialised centre (ADTC) then visiting the patient's home to identify the potential contamination sources, spreading prevention messages (good hygiene practices) and to disinfect the patient's home and neighbouring houses in order to create a cordon sanitaire and prevent the disease's propagation. SOLIDARITÉS INTERNATIONALE (SI) is involved in the second component and follows the strategy as defined by the PNEC. This

strategy has a two-fold approach: "strike" (control) and "shield" (prevention). On one hand, SI supports MSPP's rapid intervention teams to ensure a speedy response to cholera alerts. On the other, the organisation works with the communities to reduce their exposure to disease risks through the improvement of access to drinkable water, spreading prevention messages (sensitisation) and managing faecal sludge.

SI operates in various area types (urban, semi-urban and rural) and in areas where the history and epidemiology of cholera have evolved throughout the years.



## OUR "STRIKE" RESPONSE

In 2018, SI had 16 response teams, accompanied by a nurse from the Rapid Intervention Mobile Teams (French acronym EMIRA –MSPP teams).

Investigation is the first step of the response and is carried out on two levels:

### 1. At ADTC level:

SI supports the distribution of Cary-Blair medium (Fecal Sample Clinical Collection and Transport Kit), its transportation to the LNSP (Laboratoire National de Santé Publique, in English National Public Health Laboratory – see "Shield response") and follow-up for lab results. A quick WaSH assessment is also conducted to make sure all WaSH standards are respected.

### 2. At community level:

the response teams interview the patient's household in order to complete the information held by the ADTC, particularly concerning community activities (markets, gatherings, persons having been in contact with the patient,...), the water supply sources and the toilets. Resource persons within the community are also interviewed to gather information concerning other potential acute diarrhea cases.

In parallel, SI + EMIRA teams launch the community response within 24 hours, predominantly:

- A mapping of cases is conducted every month to understand the outbreak's dynamics;
- A cordon sanitaire is set-up around the patient's house to limit propagation: the cordon's minimal perimeter is either 20 households, or a 50-meter radius. The whole quarantined area is disinfected.

Cholera kits are distributed to patients' household members and within the cordon sanitaire. This is complemented by awareness-raising concerning the usage of the kit's various components. The kits may also be pre-dispatched in the ADTCs, in which case the kit is directly provided to the patient when the latter is discharged.

The teams ensure a follow-up three days after community interventions.

As for the WaSH component, a chlorination point is set-up following a quick assessment. Literate persons living close to the water point are trained to conduct Free Residual Chlorine (FRC) tests and to raise awareness. The chlorination points are set-up for one week, renewed until needed, and removed 15 days after the last cholera case in the area.

Information and awareness-raising activities are led within the specific frame of the response as well as for "shield" activities. The latter are led by sensitisation agents, on a door-to-door basis, at patients' households and inside the cordon sanitaire. In case a transmission risk in a gathering place has been identified during an investigation, the authorities in charge are contacted and must set-up awareness-raising activities in the identified area.

## Cholera kit

Since 2017, this one-month kit is composed of:

**5** oral rehydration salts (ORS) packets,

**150-200** Aquatab tablets,

**3-5** pieces of soap,

**1** awareness-raising flyer,

**1** tap bucket.



## OUR "SHIELD" RESPONSE

In addition to the awareness-raising activities previously mentioned in the "sword" response, preventive sensitisation activities are conducted during large gatherings (market, patron saint's day, national holiday, carnival ...), in bus stations, schools, at cockfights, churches, etc. Since 2017, SI has set-up three community engagement teams tasked with preventing the recurrence of cholera outbreaks in the areas initially affected, by involving the communities: local authorities, community organisations, shopkeepers.

*"In the end, SI's strategy in terms of preventing cholera persistence is to strengthen its structural approach in order to provide a long-term response."*

Another component of the structural shield response is the strengthening of drinking water supply and sanitation infrastructures. In order to do so, SI rehabilitates and builds water supply facilities to sustainably improve access to drinkable water, then ensures their follow-up (particularly water points: verification is conducted through quick water quality tests). In 2018, a Mobile Rapid Response Team for Drinking Water, Sanitation and Hygiene (in French EMO EPAH, Equipe Mobile de Réponse Rapide en Eau Potable, Assainissement et Hygiène) was set-up, allowing a response in the WaSH sector, in close collaboration with DINEPA.

For increased impact and sustainability, the focus is placed on the local actors' capacity building, for their empowerment and in order to integrate their preoccupations concerning good local governance. This support is provided for:

- **Intersectoral coordination (health – WaSH):** organising coordination meetings (cholera sectoral roundtable) and ad hoc meetings depending on outbreaks;
- **Epidemiological surveillance:** supporting data gathering and analysis, mapping and dissemination, Rapid Diagnostic Test (RDT) specimen transportation to the LNSP;
- **A rapid response to alerts:** training ADTC hygienists.

Furthermore, SI targets market vendors and trains them on faecal-oral disease transmission risks. SI teams promote home-based water treatment via social marketing (and the ABCD – Approach focused on Behavior Change Determinants) in order to ensure access to chlorinated water through public kiosks, private water providers and home-based water treatment. SI also set-up or boosted Drinkable Water Supply and Sanitation Committees (DWSSC, in French CAEPA, Comités d'Approvisionnement en Eau Potable et Assainissement) and Water Management Committees whose role is to ensure, on a daily basis, that supply systems function and are maintained. The EMO EPAH Mobile Team's response stops after the implementation of the recommendations stemming from the risk assessment conducted by SI's teams. UNICEF and DINEPA's Emergency Response Department (in French DRU, Département Réponse aux Urgences) then officially announce the end of the response.

In the end, SI's strategy in terms of preventing cholera persistence is to strengthen its structural approach in order to provide a long-term response. In parallel to this dimension, that notably includes trainings and awareness-raising as well as rehabilitation, emergency response is ensured at departmental (provincial) level and, in case of an outbreak, at national level. The teams' mobility is essential to eliminating the disease, in accordance with the PNEC.

# 6 Resources

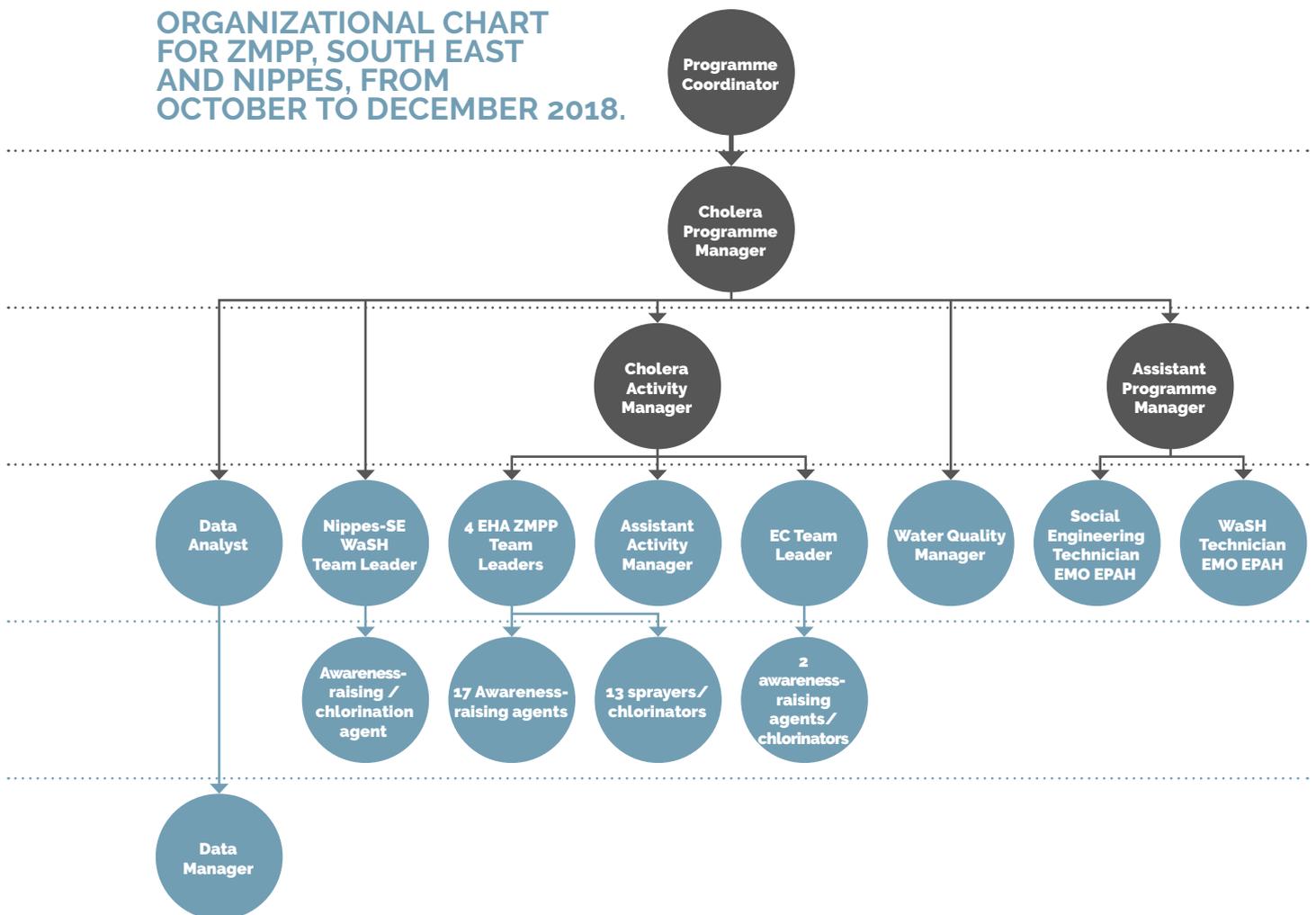
In 2018, there were 16 SI teams, each made up of:

- a Team leader in charge of coordinating 3 teams;
- an SI Awareness agent;
- an SI Chlorinating agent;
- an EMIRA [from MSPP] agent in charge of delivering prophylaxis to patients and their relatives; they also support SI agents by also spreading awareness messages.

3 out of the 16 SI teams (end 2018) are in charge of community engagement [shield] but can also implement the standard response [strike].

The mobile EMO EPAH team intervenes in support of and complements the 16 teams. At the end of 2018, it included cholera programme managers, data analysts, enumerators, water quality managers, a WaSH technician and two social engineering technicians.

## ORGANIZATIONAL CHART FOR ZMPP, SOUTH EAST AND NIPPES, FROM OCTOBER TO DECEMBER 2018.



***“The “Alert-Response” approach is both innovative and efficient: MSPP’s mobile rapid response intervention teams, supported by SI, Acted and ACF are able to deploy a cordon sanitaire in less than 48 hours”***

# 7 Perspectives and roadmap: the elimination of cholera transmission in Haiti

NGO INTERVENTION  
STATE INTERVENTION



## ELIMINATING CHOLERA TRANSMISSION IN HAITI

SEPTEMBER 2018  
30 CASES OF CHOLÉRA PER WEEK

### 3. THE HAITIAN GOVERNMENT IS ABLE TO SUSTAINABLY

Cholera is a priority issue for the government

**1. INGO/EMIRA RAPID RESPONSE TEAMS ARE ABLE TO INTERVENE AFTER THE IDENTIFICATION OF ANY SUSPECTED CASE UNTIL 0 CASE PER WEEK IS REACHED**

The quick detection of vibrio cholerae facilitates the destruction of cholera sources

### 2. AN INSTITUTIONAL AND COMMUNITY MONITORING SYSTEM, AND AN EFFICIENT

Functional laboratories exist in each administrative division (department)

ADTC/community health facilities are able to take charge of acute diarrhea cases

### 5. POPULATIONS SUSTAINABLY ADOPT GOOD HYGIENE PRACTICES

Drinking water is accessible to all in a sustainable manner

Water coverage and water quality are guaranteed by the complementarity between public and private sector actors

Populations have the means to purchase water

School is a key driver for the transmission of good hygiene practices

The children convey the message to the adults and are agents in behavior change within their families

Private actors find (financial) interest in the commitment to supply drinking water

The national PNEC plans for the pathogen to have disappeared from Haiti by 2022. With this in mind, SOLIDARITÉS INTERNATIONALE teams developed in 2018 a logic of intervention for the PNEC's ultimate phase and for the elimination of cholera transmission in Haiti. This roadmap allows the teams to adjust their WaSH interventions and also to identify the actors, in particular from the government and communities, with whom they must work and whose capacities they must build, in order to reach this final objective.

The five required conditions highlighted in red show the results in which SI played a crucial role as a WaSH actor; they occur at various times depending on the epidemiological curve's evolution.

The activities which match each of these 5 conditions are the following, those highlighted in blue are the ones for which SOLIDARITÉS INTERNATIONALE has a strong added value. They are therefore the ones on which the organisation has focused its response since early 2019.

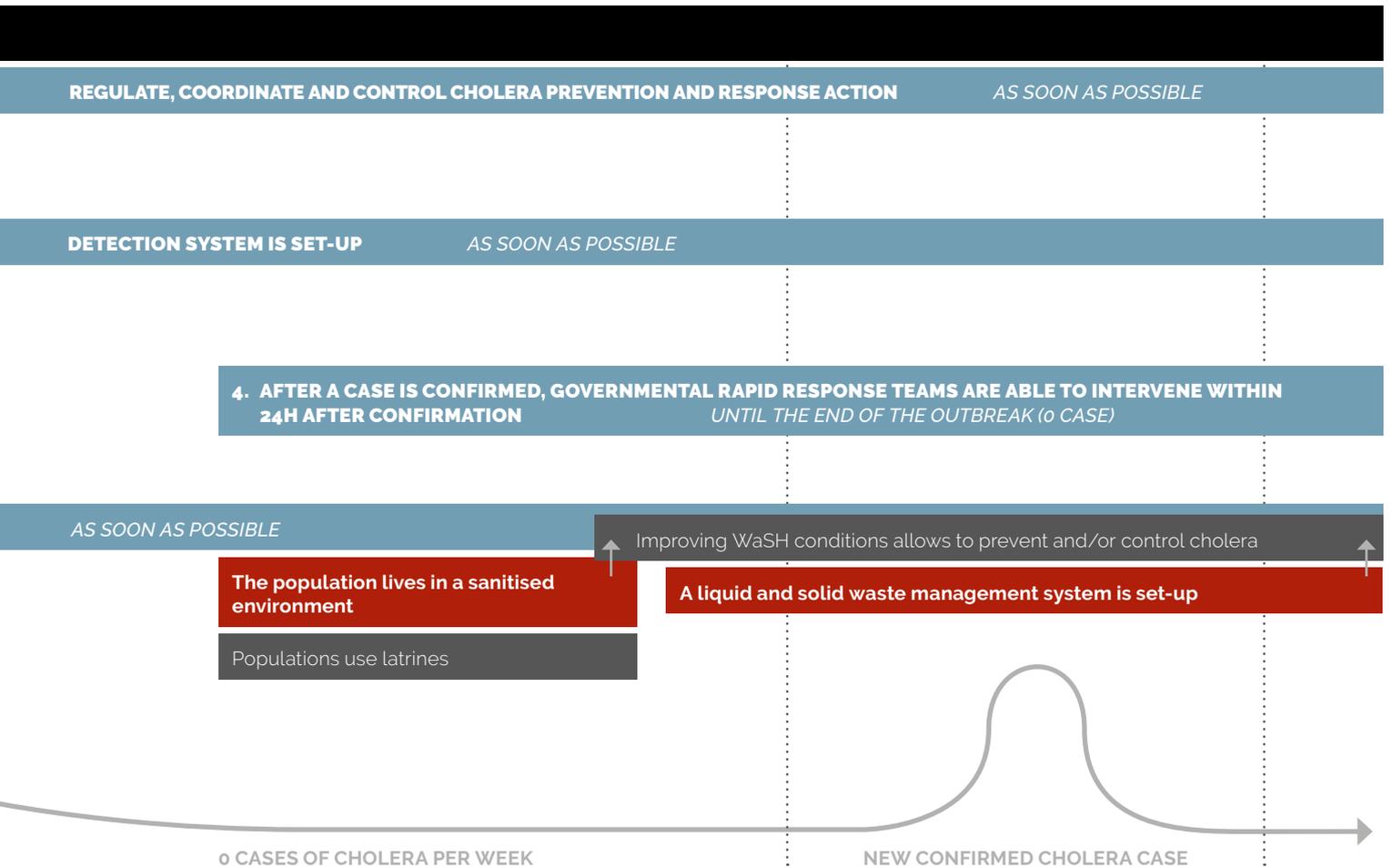
#### 1. A constant mobilisation of NGOs and EMIRA rapid response teams in order to intervene whenever a suspected case occurs, until there is 0 case per week.

**ACTIVITIES** Investigating cases and setting-up a cordon sanitaire; house disinfection; cholera kit distribution; prophylaxis distribution; hygiene promotion; disinfection/ water point rehabilitation.

#### 2. Setting-up an institutional and community monitoring and efficient detection system.

**MONITORING ACTIVITIES** Developing and improving existing health centres to help them care for suspected cases; construction of health centres, training health personnel to care for suspected cases; distributing equipment and consumable supplies.

**DETECTION ACTIVITIES** Training health and laboratory personnel; setting-up a logistical cold-chain system in terms for transportation and refrigeration; setting-up communication channels for information sharing.



**COMMUNITY MONITORING ACTIVITIES** Capacity building for the various focal persons within the communities; awareness-raising to demystify cholera in order to avoid patients and their families feeling ashamed...

**3. Regulation, coordination and control of prevention and response actions by the Haitian government**  
**ACTIVITIES** Providing government experts (MSP, DINEPA, MENFP) with the means to function sustainably, through financial and logistical means in addition to an internal and external coordination system.

**4. The governmental rapid response teams intervene 24 hours after a case is confirmed, until the end of the outbreak (0 case).**  
**ACTIVITIES** Same activities as for condition 1. In this case, SI's added value lies in the capacity building of governmental actors.

**5. Populations sustainably adopt good hygiene practices.**  
**WASH ACTIVITIES IN SCHOOLS** Construction of WaSH infrastructures in schools; developing school curricula about hygiene; training school teachers; creating hygiene clubs in schools.

**WATER SUPPLY ACTIVITIES** Setting-up water supply and waste management systems; building hydraulic infrastructure; training management committees to manage this infrastructure; setting-up a water quality control system; promoting water storage and treatment methods.

**SANITATION ACTIVITIES** Advocacy with town hall officials for the construction of latrines in houses; building/rehabilitating latrines in public spaces; setting-up waste collection and management systems run by the communities; setting-up waste water (sewerage) management systems.

# 8 Strengths and weaknesses



## STRENGTHS / GOOD PRACTICES

Institutional epidemiological surveillance is functional: the two types of surveillance done in treatment centres and in communities allow for very large coverage. Thanks to the setting-up of watchmen in ADTCs, response teams were able to be much more reactive and efficient (almost less than 24 hours to intervene in ZMPP).

Capacity building of local actors allows for a progressive exit strategy which is taking place in parallel to the decrease of the number and incidence of cholera cases. The mixed SI-EMIRA team is a very good example.

A logic of intervention was developed for the cholera response in the country, which SOLIDARITÉS INTERNATIONAL is truly part of and has real added value, particularly in terms of reinforcing the operational capacities of decentralised government structures.



## WEAKNESSES

The government's participation is sometimes limited, in particular when it comes to the contractualization process and the coordination of certain activities.

Paradoxically, despite NGOs building local actors' capacities to implement progressive exit strategies, local actors and authorities rely on these very NGOs' interventions led by UNICEF, especially in terms of equipment usage and logistical response mechanisms.

Difficulty in responding to 100% of all suspected cases within 48 hours because some areas remain hard to access. Follow-up activities in remote areas during post-intervention missions are hard to implement because of the same issues related to access.



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## RESOURCES

*Choléra : Haïti 2010-2018, histoire d'un désastre*  
Renaud Piarroux

*Plan National d'Élimination du Choléra moyen terme 2016-2018*  
Ministry of Public Health and Population - Haiti

UNICEF website, Response and prevention: battling Cholera in Haiti (<https://www.unicef.org/stories/response-and-prevention-battling-cholera-haiti>)

*De Vos Propres Yeux : To end Cholera*  
(<https://devospropresyeux.org/en/saisons/haiti/episode-episode-1/>)

*The ABCD Approach- approach focused on behaviour change determinants*  
(<https://www.solidarites.org/wp-content/uploads/2017/05/The-ABCD-Approach-2017.pdf>)

## HAITI CHOLERA RESPONSE FACTSHEET - 2019

REPORT  
SOLIDARITÉS INTERNATIONAL

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