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# Emergency Plan of Action (EPoA)

## Brazil: Yellow Fever

 International Federation  
of Red Cross and Red Crescent Societies

<b>DREF Emergency: MDRBR008</b>	<b>Glide n°</b> <a href="#">EP-2017-000026-BRA</a>
<b>Date of issue:</b> 20 March 2017	<b>Date of the disaster:</b> 13 January 2017
<b>Head of operation (responsible for this EPoA):</b> Pabel Angeles - Regional Management Disaster Coordinator for South America - IFRC	<b>Point of contact (name and title):</b> Óscar Zuluaga Humanitarian Programmes Manager- Brazilian Red Cross (BRC)
<b>Start date for the operation:</b> 19 March 2017	<b>Expected timeframe:</b> 3 months (end date 19 June 2017)
<b>Overall operations budget:</b> 200,791 Swiss francs (CHF)	
<b>Number of people affected:</b> 1,431 suspected cases, 379 confirmed cases, 132 confirmed deaths from yellow fever.	<b>No. of people to be assisted:</b> 26,100 people (6,525 families) directly; 50,000 people indirectly through the communications campaigns
<b>National Society Presence (No. of volunteers, personnel, branches):</b> 1 headquarters, 21 branches, 3,000 volunteers, and 300 staff.	
<b>Partners of the Red Cross Red Crescent actively involved in the operation (if available and relevant):</b> The International Federation of Red Cross and Red Crescent Societies (IFRC)	
<b>Other partner organizations actively involved in the operation:</b> World Health Organization (WHO), Pan American Health Organization (PAHO); Government agencies: Brazilian Ministry of Health, health departments; <i>Fundación Oswaldo Cruz</i> (FIOCRUZ)	

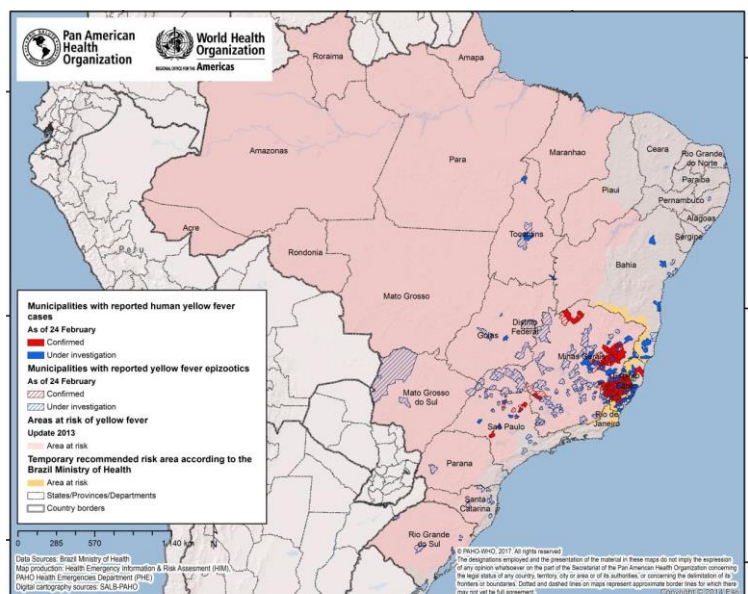
[<Click here for the DREF budget. Click here to view the map of the affected areas and here for the contact information>](#)

## A. Situation Analysis

### Description of the disaster:

On 24 January 2017, the National Liaison Centre for the International Health Regulations of Brazil (RSI for its acronym in Portuguese), which is an extension of WHO, provided updated information to PAHO/WHO on the country's yellow fever situation; the information that was provided showed that the geographic distribution of confirmed cases is expanding and that it not only includes the state of Minas Gerais, but also the states of Espírito Santo, São Paulo, and Rio Grande do Norte. In addition, cases are being investigated in the states of Bahia, Goiás and Tocantis.

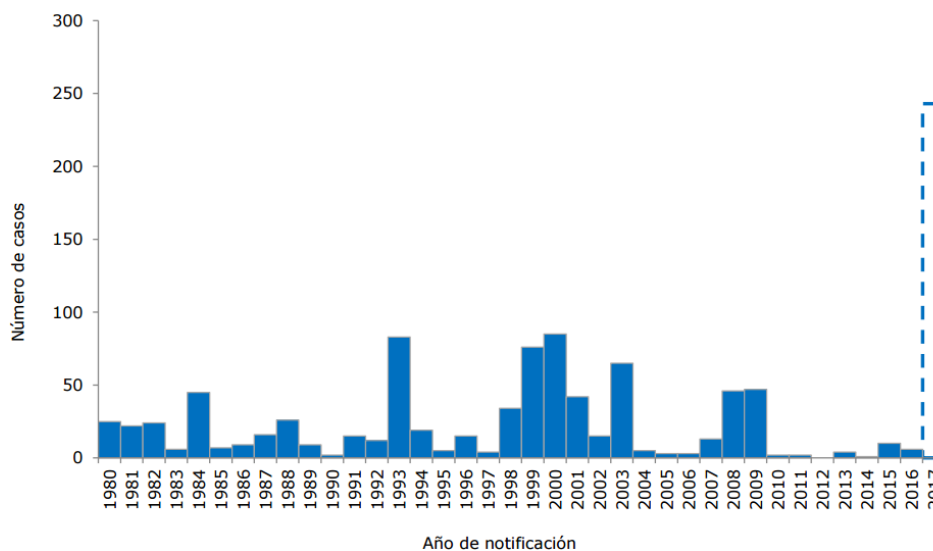
According to epidemiological report number 29 from Brazil's Ministry of Health, 1,431 suspected cases of yellow fever have been reported 1 December, 2016 to 10 March 2017; of these cases 379 (26.50 per cent) were confirmed, 125 (8.73 per cent) were ruled out and 927 (64.77 per cent) are still under investigation.



Geographic distribution of reported human yellow fever cases and yellow fever epizootics, Brazil, up to 24 February 2017.  
Source: PAHO-WHO

The total number of suspected and confirmed cases is the highest that has been registered in the country since 2000 according to the WHO, and [the vector poses a risk of spreading the disease to other parts of Brazil](#) and other neighbouring countries in South America.

**Graph 1.** Confirmed cases of yellow fever per reporting year. Brazil, 1980 until EW 5 of 2017



**Source:** Data from the Brazilian Ministry of Health, published by PAHO/WHO<sup>1</sup> and reproduced by the IFRC

The epidemiological situation for the national impact is:

4 regions, 9 states, and 183 municipalities. The regions and states with reported cases are:

**Central Region:** Brasília, Goiás, Mato Grosso do Sul

**North Region:** Tocantins

**North-eastern Region:** Bahia, Rio Grande do Norte

**South-eastern Region:** Espírito Santo, Minas Gerais, Sao Paulo

Of the abovementioned regions, the south-east is the most affected, particularly in the [states of Espírito Santo, Minas Gerais and Sao Paulo](#).

Classification of yellow fever cases					
Federal Unit	Municipalities with reported cases	Suspected cases reported	Cases under investigation	Confirmed cases	Confirmed deaths
<b>Central region</b>					
Brasilia	1	6	0	0	0
Goiás	5	5	2	0	0
Mato Grosso do Sul	1	1	0	0	0
<b>North region</b>					
Tocantins	7	10	6	0	0
<b>North-eastern region</b>					
Bahia	8	16	9	0	0
Rio Grande do Norte	1	1	1	0	0
<b>South-eastern region</b>					
Espírito Santo	46	271	150	87	20
Minas Gerais	89	1,093	748	288	109
Sao Paulo	25	28	11	4	3

Under investigation by another Federal Unit of the health network	0	0	0	0	0
<b>Total</b>	<b>183</b>	<b>1,431</b>	<b>927</b>	<b>379</b>	<b>132</b>

Adapted epidemiological bulletin number 29  
Brazilian Ministry of Health 10 March 2017.

Of the confirmed cases, more than 80 per cent have been registered mainly in men between the ages of 31 and 60 (economically active ages).

To date, 132 fatal cases of yellow fever have been confirmed and 106 remain under investigation; the reported death rate in confirmed cases is 34.8 per cent.

A total of 83 per cent of the cases have been reported in Minas Gerais, located in the south-eastern region of Brazil; it has a total population of 21 million inhabitants, and it is Brazil's fourth largest state in terms of land mass with 586,528.2 km<sup>2</sup>. Additionally, its territory is divided into 853 municipalities, which is the highest total among all of Brazil's states, and its health network is divided into 28 regional health units.



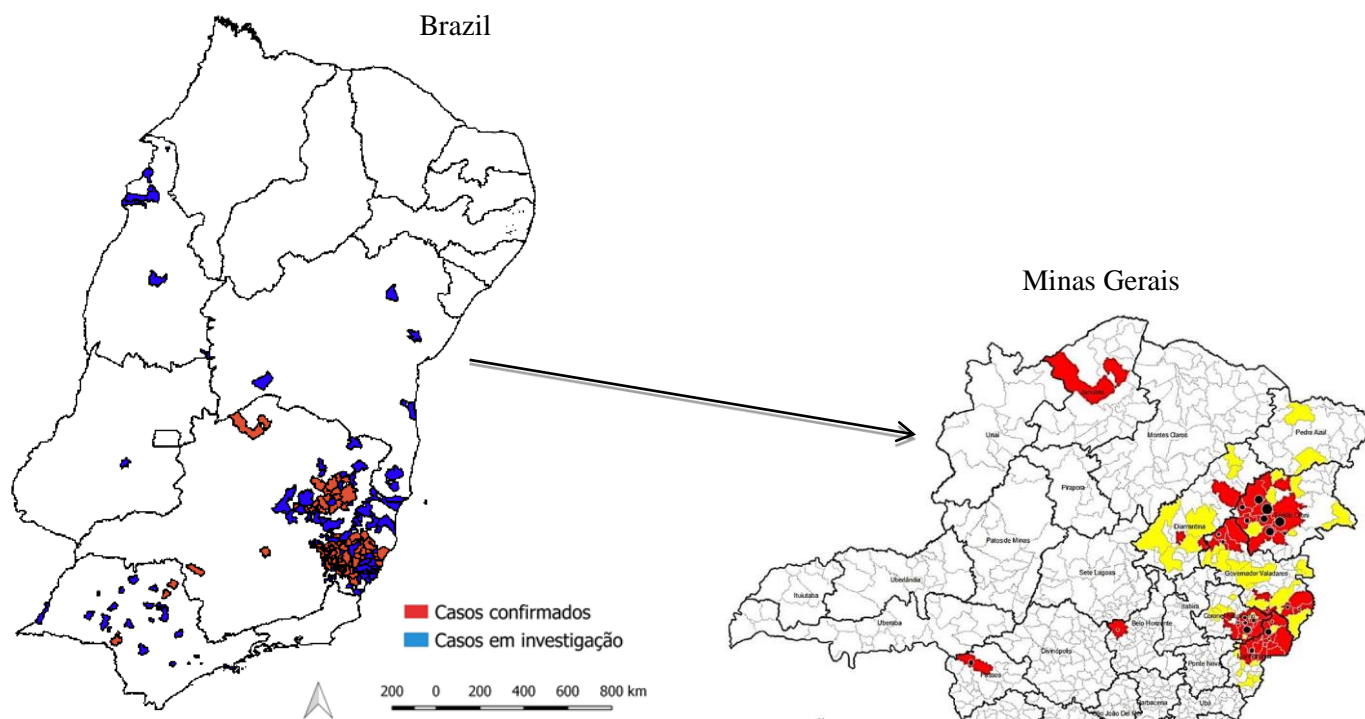
A BRC volunteer conducts a field visit using ODK in in the municipality of Itambacuri in Mina Gerais. Source: BRC

Due to the high increase in cases, the Ministry of Health declared the situation a public health emergency on 13 January 2017 in Minas Gerais in the coverage areas for the regional health units of Coronel Fabriciano, Governador Valadares, Teófilo and Manhumirim Otoni; the state of emergency was declared for a 180-day period with the aim of mobilizing resources to respond to the outbreak.

To date, ten regional health units have reported cases of yellow fever in Minas Gerais; of these units, the regional health unit in Teófilo Otoni has reported the most yellow fever cases and deaths in the municipalities of Ladainha, Novo Cruzeiro, Itambacuri, Pote and Teófilo Otoni.

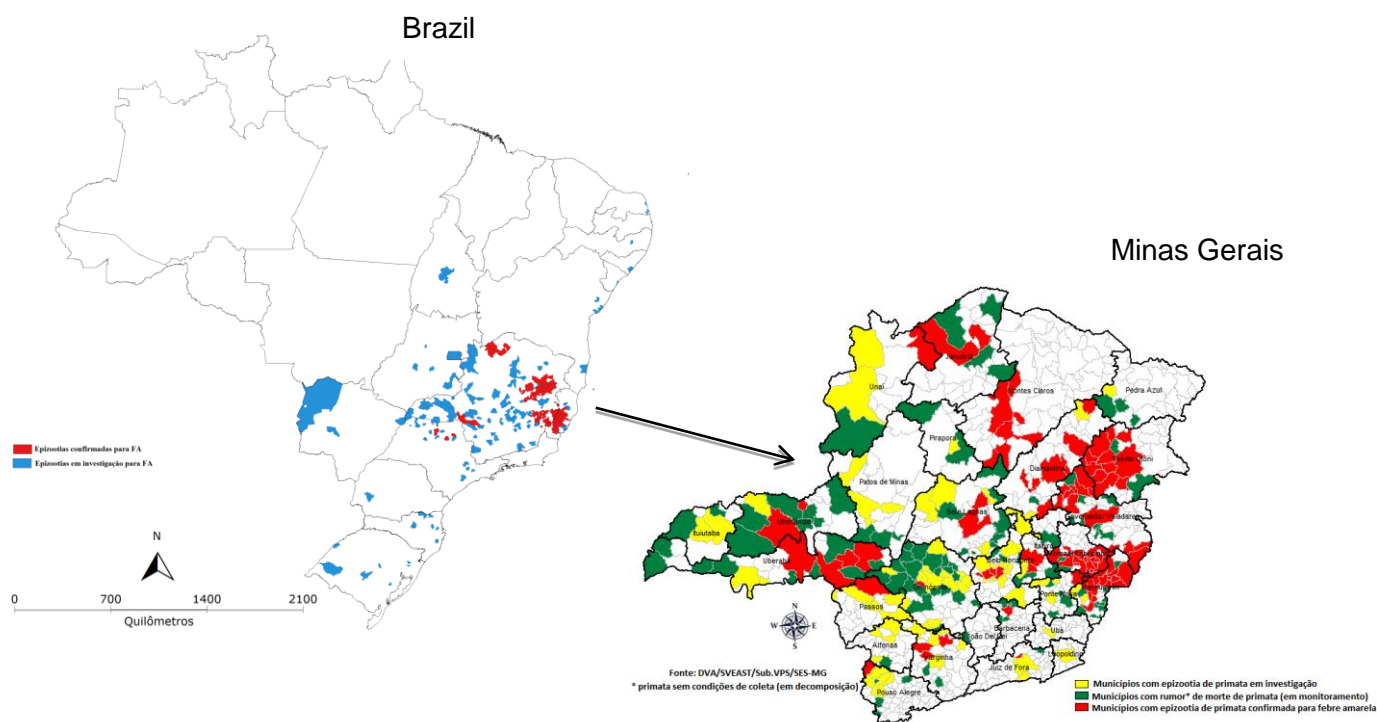
According to the distribution of confirmed cases, 86 per cent is men and 14 per cent is women. Regarding vaccinations for these people, 62 per cent of the total confirmed cases had not been vaccinated, 35 per cent do not their vaccination status and only 3 per cent had been vaccinated but they were not immunized in accordance with the national immunization program guidelines, according to the Brazil's Ministry of Health; furthermore, it stated that while some people had been vaccinated against the disease, they were vaccinated more than 10 years ago, which is outside of the vaccination's period of validity, in addition other people were vaccinated once they began showing symptoms of yellow fever.

From January and March 2017, the Ministry of Health has distributed 14.95 million vaccines in the most affected states, 6.5 million (Minas Gerais) 3.25 million (Espírito Santo) 3.25 million (Sao Paulo) 900,000 (Bahia) and 1.05 million (Rio de Janeiro)



Since the beginning of the outbreak, 1,228 epizootics<sup>2</sup> have been reported in non-human primates (NHP), of which 386 were confirmed as yellow fever. 141 were under investigation and 382 remain under investigation.

Epizootics in NHP were reported in the Federal District and the states of Alagoas, Bahia, Goiás, Espírito Santo, Mato Grosso do Sul, Minas Gerais, Paraná, Pernambuco, Rio Grande do Norte, Rio Grande do Sul, Santa Catarina, São Paulo, Sergipe, and Tocantins; epizootics with yellow fever have been confirmed in 91 of Minas Gerais' municipalities.



Distribution of epizootic yellow fever cases  
Under investigation (blue and yellow). Confirmed (red). Rumors of deaths in primates and under surveillance (green)  
Brazilian Ministry of Health - Minas Gerais Health department.

Considering the internal movements of infected people and monkeys and the low vaccine coverage in regions that previously were not considered at risk for yellow fever transmission, the detection of new cases is to be expected in other states; the risk is also present that infected people travel to regions of Brazil or internationally where there are *Aedes aegypti* mosquitos and local cycles of person-to-person transmission could begin. Given the risk of the current outbreak expanding in size and scope, Rio de Janeiro's health secretariat declared that the entire population will be vaccinated as preventative measure due to the state's proximity to Minas Gerais, Espírito Santo and Sao Paulo.

To date, there have not been reports of yellow fever cases in other countries/territories that are connected to the current outbreak in Brazil; however, PAHO/WHO reiterated that reports of epizootics, which are currently under investigation in the states of Mato Grosso do Sul (borders Bolivia and Paraguay); Santa Catarina (borders Argentina); Rio Grande do Sul (borders Uruguay and Argentina) and Paraná (borders Argentina and Paraguay) represent a risk of the virus circulating towards the countries that border Brazil, mainly in the areas that share the same ecosystem.

The current outbreak, due to the presence of unvaccinated people in mostly rural areas, extends beyond the regions defined by the WHO in 2016 as risk zones for international travel.

Although it is possible that a change take place in the yellow fever transmission cycle in this current outbreak, there is no evidence suggesting that the *Aedes aegypti* has had a role in transmission to date.

### Background and yellow fever epidemiological situation in Brazil.

<sup>2</sup> Diseases that spread quickly among animals, according to Dictionary.com

Brazil has 211 million inhabitants per the United Nations Department of Economic and Social Affairs; its health system is composed of a broad public sector, the Single Health System (SUS for its acronym in Portuguese), which provides coverage to 75 per cent of the population, and the other 25 per cent is covered by the private sector, which is composed of the Supplemental Healthcare System (SAMS for its acronym in Spanish) and a direct payment system.

The SUS provides services in a decentralized manner through a network of clinics, hospitals and other kinds of federal, state and municipal facilities, as well as private establishments. With state and federal technical and financial support, each municipality is responsible for providing services to its population or referring clients to other municipalities.

In Brazil, yellow fever presents endemic levels mainly in the Amazonian region, while outbreaks outside of the Amazon have been sporadically registered when the virus finds susceptible people (unvaccinated).

The presence of cases has corresponded seasonal period for disease outbreaks (December to May); nevertheless, epizootics in NHP have been reported during periods of low occurrence.

The region most recently affected by a yellow fever outbreak is the country's south-eastern region. In March 2016, a human case was confirmed in Sao Paulo, and another human case was confirmed in the state Ribeirao Preto in December of that same year.

Moreover, an increase in the number of epizootics in NHP was observed (18 confirmed cases of epizootic yellow fever) in the state of Sao Paulo in 2016 (until epidemiological week 51), indicating disease transmission in a non-seasonal period. Likewise, the occurrence of yellow fever cases in ecotourism regions has been demonstrated near dense population centres.

As yellow fever is a disease of interest for public health officials in Brazil, public institutions must notify health professional within 24 hours if a case is reported.

While Brazil has not registered urban cases of yellow fever since 1942, the government has emphasized the importance of strengthening vector control strategies for *Aedes aegypti* mosquitos to prevent transmission in urban areas where mosquitos can act as the main transmitter for yellow fever, dengue, chikungunya and Zika<sup>3</sup>.

## Summary of the current response

### Summary of the Host National Society

The Brazilian Red Cross has a team of 25 people (volunteers and employees) using the national intervention team (NIT) strategy, who are trained in the control of epidemics, psycho-social support, sanitation, hygiene promotion and Zika. Most the National Society's programmes are coordinated from its central office, such as first aid which is one of its strengths; The BRC also has a first aid application software, which has been downloaded by more than 20,000 people, materials for community education about control of epidemics and vector control such as the *Aedes aegypti* mosquito.

On its webpage, the National Society has created a [questions and answers section](#) about yellow fever, which has been shared with its national communications network (17 regional branches).

Some branches have experience in community work on diseases transmitted by the *Aedes aegypti* such as dengue, chikungunya and Zika. In 2015, a Disaster Relief Emergency Fund (DREF) was developed due to the Rio Grande do Soul floods, and in 2016, epidemic control activities were carried out due to the Zika epidemic, with participation from more than 1,000 volunteers.

The BRC also has experience in health promotion, first aid, and psycho-social support activities, in addition to activities on more secure access to more at-risk communities such as *favelas*.

Currently, the BRC's Department of National Programmes and Risk Management is carrying out initial monitoring of the outbreak; it has created a team of 3 BRC delegates to conduct an assessment in the states of Minas Gerais and Espírito Santo together with the health National Intervention Team (NIT), and it maintains contact and holds frequent meetings with the Ministry of Health and Pan American Health Organization in Brasilia. Also, a yellow fever communications strategy is being developed, with support from the IFRC through its regional Zika team.

<sup>3</sup> According to the Ministry of Health, it was notified of 1,500,535 cases of dengue, 271,824 cases of chikungunya and 215,319 cases of Zika in 2016. Up to Epidemiological week number 4 (28 January 2017) in 2017, 21,174 cases of dengue, 3,754 cases of chikungunya and 316 cases of Zika have been reported.

## Summary of the Red Cross Red Crescent Movement in the country

Through its Disaster and Crisis department, disaster management coordinator for South America and its Zika team, the IFRC's regional office for the Americas (ARO) in Panama has supported the National Society's assessment process and helped with the development of a plan of action. ARO also mobilized a health Regional Intervention Team (RIT) member to Brazil to carry out a health assessment in the most affected areas and support the National Society on the development of the plan of action; the IFRC's office Lima, Peru has provided technical support on the field actions that are being conducted in conjunction with the health department and the affected communities in Minas Gerais and other operational actions with the Pan American Health Organization in Brasilia, and the IFRC cluster office for southern cone countries in Buenos Aires, Argentina, including Brazil, has also provided support. Lastly, with the regional disaster management delegate's support, a report on the country's yellow fever outbreak was posted on the Disaster Management Information System (DMIS) on 24 February 2017.



A non-hospital meeting in the municipality of Itambacuri, with BRC personnel and the IFRC's Regional Intervention Team

The International Committee of the Red Cross (ICRC) has a regional delegation in Brasilia (covering Argentina, Brazil, Chile, Paraguay and Uruguay) and an office in Rio de Janeiro through which it carries out community work (first aid), in association with the Brazilian Red Cross; it also provides advice to the National Society on safer access methodology, which contributes to improved access to communities. The IFRC has shared relevant information about this emergency with the ICRC.

No Partner National Societies (PNSs) currently have a presence in Brazil.

## Summary of non-Red Cross/Red Crescent actors in the country

WHO issued an official notice advising people to be vaccinated at least 10 days prior to visiting the affected locations; likewise, it issued an update with new transmission risk zones for yellow fever, reinforcing information on prevention measures to avoid mosquito bites, knowledge about diseases symptoms and signs, and how to access medical attention in case it is necessary during or after travel. PAHO is working with the Brazilian government and Ministry of Health to reinforce control actions. The IFRC's RIT and the BRC team met with PAHO in Brasilia to analyze the outbreak's impact and define the support strategies through communication, social mobilization and community education campaigns. The Oswaldo Cruz Institute (a public health institution of investigations, technology and innovation in Brazil) is supporting the government's investigations (epizootics, entomological), laboratory diagnoses of suspected cases and on its epidemiological monitoring to reinforce the measures of control that are in place.

Due to the current outbreak, the Ministry of Health's strategies are:

- Notify health professionals and state and municipal health departments regarding monitoring and immediate notification of suspected yellow fever cases and epizootics in NHP.
- Urban vector control of *Aedes aegypti* as an additional strategy to reduce urban transmission risk, especially in affected municipalities.
- From January to February 2017, the Ministry of Health distributed 14.25 million vaccines in the states of Minas Gerais, Espírito Santo, Sao Paulo, Bahia and Rio de Janeiro, prioritizing federal health units with the highest number of cases to contain the outbreak.
- Creation of a [webpage](#) with information and advice on the situation.

Brazil's federal, state and municipal health authorities have adopted the following strategies:

- Reinforce vaccination measures in affected areas.
- Reinforce medical attention measures for patients with suspected and confirmed cases of yellow fever.
- Ongoing educational measures for health professionals.
- Vector control activities to eliminate the breeding grounds of *Aedes aegypti* in the affected municipalities.
- Establish "situation rooms" in the affected states and nationally.

### Needs analysis, selection of beneficiaries, risk assessment and scenario planning.

To date, 4 regions, 9 states and 183 municipalities in Brazil have reported cases of yellow fever; the outbreak continues to be concentrated in the country's south-eastern region (Minas Gerais, Espírito Santo and Sao Paulo), and Minas Gerais is the most affected state. Most of people affected by the outbreak come from communities with a low socioeconomic level in rural and dispersed populations.

The health departments in the affected areas have carried out massive vaccination campaigns and house visits to vaccinate people, and the monitoring departments and health institutions have reinforced epidemiological monitoring actions and attention for affected people.

Based on the assessment of the most affected municipalities in Minas Gerais (Caratinga, Itambacuri, Teófilo Otoni, Pote, Ladainha, Setubinha) it was shown that the victims in some of the lethal cases had some predisposition to hepatic<sup>4</sup> risk (alcohol consumption or liver disease). The vaccination coverage for the majority of municipalities is between 60 per cent and 85 per cent; the people who have not yet been vaccinated tend to live in rural or remote areas, or were not home when the vaccination campaigns took place. Thus, the identification and mapping of people still lacking vaccination needs to occur. In addition, the public, especially children, need to be made aware that they should update their vaccinations not only against yellow fever, but also against other preventable diseases that could cause outbreaks and epidemics.

#### Confirmed cases and deaths due to yellow fever in the most affected municipalities in Minas Gerais, where the Red Cross has done assessments

Municipalities	Confirmed cases	Confirmed deaths
Caratinga	23	0
Itambacuri	15	10
Ladainha	32	13
Novo Cruzeiro	26	10
Poté	14	7
Setubinha	8	4
Teofilo Otoni	13	11
<b>TOTAL</b>	<b>131</b>	<b>55</b>

Source: Minas Gerais health department  
Epidemiological Bulletin 7 March 2017

The lethal cases evolved quickly in this state (between 2 and 3 days); most of the deceased are men who were responsible for their family's sustenance, and the affected families and communities continue to show sadness and distress.

According to the regional director of epidemiologic monitoring in Teofilo Otoni, the last regional committee meeting clearly showed that there is a need for psychosocial support due to the disease's presence, rapid evolution and the fact that there is not currently an institution or established strategy for psychosocial support for the affected families and communities.

Most of the municipalities have limited resources, and since 2015 they have been facing a water crisis that has limited the water supply; additionally, there is a presence of puddles and waste that is being improperly disposed of in different locations. Moreover, there is a high level of *Aedes aegypti* infestations, and dengue and chikungunya are also endemic in the affected municipalities, posing an imminent risk of epidemics according to the health department's technical assessment; therefore, the BRC will continue with vector control actions such as home visits, clean up campaigns and the collection of waste, and the promotion of community participation and a behavioural change, as most of these activities are only carried out by municipal community health agents.

Since the states of Espírito Santo and Sao Paulo have a significant number of reported and confirmed cases and the risk conditions for the affected communities are the same as the ones mentioned previously, support is being provided for prevention actions in the municipalities of Ibatiba, Colatina, Ribeirao Preto and Santa Cruz, respectively.

<sup>4</sup> Relating to the liver, according to Dictionary.com

## Selection of beneficiaries and vulnerability criteria

The selection of communities and beneficiaries will be made based on the following criteria:

### Communities.

- Urban and rural communities located in municipalities affected by the outbreak.
- Communities with a low socioeconomic level that do not have suitable sanitation conditions.
- Communities with high infestation levels of *Aedes aegypti* and a high prevalence of diseases transmitted by this mosquito

### Beneficiaries.

- Men between 31 and 60 years of age that live and work in urban and rural areas of municipalities affected by the outbreak.
- Children under 5 years of age, pregnant women, persons living with disabilities, people over the age of 60, people with immune deficiency such as HIV for whom the vaccination is not recommended.
- Families that have had yellow fever cases or deaths.
- Students in affected municipalities.

### Risk assessment

The increase in the number of yellow fever cases in Minas Gerais, confirmation of cases in other states, and registered epizootics in states where there have been human cases indicate a geographic propagation of the outbreak in new regions.

Considering the internal movements of infected people and yellow-fever carrying monkeys and the low vaccine coverage in regions that previously were not considered at risk for yellow fever transmission, it is to be expected that new cases will be detected in other states in the country; there is also the risk that infected people travel to regions of Brazil or internationally where there are *Aedes* mosquitos, beginning local cycles of person-to-person transmission.

Brazil is one of the least safe countries in the region, thus volunteers will need training on safe access before carrying out activities in the communities, which will be carried out by the central body and branches according to the BRC's safe access (*fique seguro*) manual; they will also require visibility and personal protective items (caps, t-shirts, repellent, among others) and a first aid kit to go into the communities. Volunteers who carry out activities in communities affected by the outbreak could acquire yellow fever or other diseases transmitted by *Aedes aegypti* such as dengue and chikungunya, which are highly endemic in south-eastern Brazil. Volunteers must have completed the yellow fever vaccination scheme according to the national immunization programme, and they need to have repellent and sun screen due to the high temperatures in the affected areas, which can reach 37° Celsius.

## B. Strategy and operational plan

### General objective

The general objective for this plan of action is to reduce the yellow fever transmission risk for 26,100 people (6,525<sup>5</sup> families) through health and care and water, sanitation and hygiene promotion actions (including vector control activities, community-based monitoring and psycho-social support) and sensitize for 50,000 people through communications campaigns in the most affected communities of south-eastern Brazil.

### Proposed strategy.

The BRC strategy will be based on direct work with communities affected by the yellow fever outbreak, with joint actions among BRC volunteers, community health and community leaders, which will be conducted in coordination with municipal and state authorities and civil defence bodies. The National Society will prioritize its actions in the state of Minas Gerais due to the regional public health emergency decree. A field team will work in Minas Gerais with the Teófilo Otoni Regional Health Unit, and it will strengthen vector control and sanitation actions with community health agents from the municipal health secretariats in Teófilo Otoni, Itambacuri, Poté, Ladainha, Setubinha and Novo Cruzeiro. Moreover, the BRC will conduct actions in Espiritu Santo and Sao Paulo, in coordination with the municipal health secretariats and its branches, and the National Society will focus its actions in 10 municipalities in Brazil's south-east

<sup>5</sup> This figure is based on the average family size of 4 people.

region. Lastly, the BRC will conduct training courses in Belo Horizonte and Brasilia with the local branches to strengthen the community actions.

#### People directly benefited by the operation.

REGION STATE	PEOPLE	FAMILIES	Participating municipalities
South-eastern region			
Minas Gerais	13,500	3,375	Teofilo Otoni, Poté, Itambacuri, Ladainha, Setubinha, Novo Cruzeiro
Sao Paulo	9,000	2,250	Ribeirao Preto, Santa Cruz
Espirito Santo	3,600	900	Ibatiba, Colatina
<b>Total</b>	<b>26,100</b>	<b>6,525</b>	<b>10</b>

Through local communications campaigns implemented via local media, such as community radio and public service announcements in local airports, bus terminals, and other location, the objective is to raise awareness among 50,000 people in the area of intervention.

Initially, the National Society will begin by training their volunteers; these volunteers will then train community health agents in control of epidemics/psycho-social support in epidemics and epidemiological monitoring with a community approach using Open Data Kit (ODK), with the objective of identifying and reporting mosquito-breeding grounds and people who need the yellow fever vaccination. At the same time, the National Society will work on a national communications strategy about yellow fever, in addition to supplying repellents, long-lasting insecticide treated [mosquito] nets (LLITNs), protective netting for water containers and sanitation kits; thus, the BRC will strengthen community health agents from the local health departments' work and carry out vector control activities and home visits in affected communities with the aim of strengthening local networks on the control of diseases transmitted by mosquitoes.

Through the plan of action, the following actions are proposed:

1. National communications campaign on yellow fever prevention.
2. Strengthening community and volunteer health agents in the control of epidemics / psycho-social support and community epidemiological monitoring to identify, map risk areas and report mosquito-breeding grounds and people who need to be vaccinated.
3. Community and school activities to improve sanitation for the identification and elimination of mosquito-breeding grounds.
4. Improve individual and family protection measures for vulnerable populations with repellents, LLITNs and protective netting for water containers.
5. Psycho-social support activities for affected families.

In summary, the number of beneficiaries that will be directly benefited is the following:

Total: 26,100 people (6,525 families) in 10 municipalities

- 6,525 families will receive mosquito repellent (1 unit per family). The National Society has the repellent; however, the DREF budget will be used to transport the units of repellent to the field.
- 1,800 of the most vulnerable families will receive LLITNs (1 per family)
- 900 families will receive protective netting for their water containers (1 per family)
- 650 families will benefit from the psycho-social support activities
- 200 community health agents will be strengthened in epidemic control (20 per municipality)
- 13 communities, 13 schools, 6 branches (at least 1 community and 1 school per municipality) in the 10 most affected municipalities in Minas Gerais will receive sanitation kits

#### Operational support services

The BRC will respond to the outbreak on three levels: political, managerial and operational. Its response and participation plan will include the following sectors:

- ✓ Department of Communication.

- ✓ Department of Administration and Finance.
- ✓ Department of Humanitarian Programmes and Risk Management.
- Education and health.
- Volunteers and youth.
- Information and Technology.
- Monitoring and assessment.
- Security during operations.

### Human resources

To implement this plan of action, the BRC will deploy its National Intervention Team specialized in control of epidemics, sanitation and hygiene promotion, and psycho-social support, in addition to volunteers from selected branches to carry out the intervention.

Since the operation will be coordinated from the National Society's central office in Rio de Janeiro, the National Society will need a full-time operations coordinator, who will oversee the monitoring and reporting for the duration of the operation, a field coordinator to implement this operation's activities, a technological and communications official to support the monitoring of community and a logistics coordinator to implement logistical actions. The services of a designer will also be needed at the beginning of the operation to structure the operation's national communications campaign in coordination with the BRC's national Communications Department. Lastly, 400 volunteers will require a per diem and personal protective items such as shirts, baseball caps, repellent, gloves and other material for field work. In addition, the National Society deploy its health, education, and communication and humanitarian programme teams to the field.



An IFRC RIT and a BRC volunteer conduct a home visit in the municipality of Itambacuri. Source: BRC

As for the IFRC, a health RIT with experience in control of epidemics and psycho-social support will be deployed to Brazil for two months to support the National Society on the plan of action's implementation and psycho-social support in epidemics activities.

### Logistics and supply chain.

The National Society has been following the IFRC's standards for its procurement of goods and services process. Additionally, it has a national warehouse where it can store goods for the operation. Which may be necessary since most of the purchases will be made locally. Most of the purchases will be made locally, with the support of the BRC's Logistics Department.

Due to the large distances between intervention areas in Brazil, a vehicle will be rented locally to transport the team and volunteers to the field to carry out community activities in Minas Gerais and Espírito Santo.

### Information Technology (IT)

The National Society has an IT Department with computers and internet access, where the ODK system is being used for needs assessment; the IT Department will be tasked with collecting information, carrying out the community-based epidemiological monitoring and mapping the mosquito-breeding grounds and people who need the vaccination, and the compiled information will also be used to develop baselines and surveys with beneficiaries. These actions will take place with the aid of health and control of epidemics agents in the health departments, and. Finally, the operation will be monitored through the Dashboard programme.

An ODK Kit, ODK license and the Dashboard programme will be acquired to implement these activities.

### Communications

The National Society has a national communications and media department and a national communications network with 17 branches; all of which will be involved in the coverage and dissemination of the operation through local, regional and national media. Likewise, internal and external dissemination of the operation will occur through the National Society's communications channels, as occurred with [this press release](#).

Communication with the IFRC will take place through the BRC's Communications Department, and it will be used to strengthen the communications strategy and reflect the operational actions, as occurred during the Zika operation.

Communication is a key element in this response plan, and it is an important part of this additional regional support structure/approach; consequently, it is vital that there is strong capacity dedicated to this role to develop relevant content and a communication campaign with two areas of focus: inform about yellow fever and reduce the risk of the spread of yellow fever and other vector-borne diseases through mosquito control and other required measures.

There is a need to work at the local community level to spread key messages and promote preventive actions, fulfilling a need to move towards a more structured and targeted approach to reach key community change agents and influencers; there is also the need to strengthen communications with external actors, including media, partner organizations and governments/authorities.

### **Communication, community engagement and accountability: promoting behavioural change and enhancing communication and engagement with communities to control and prevent yellow fever.**

The main aim of the regional communication and engagement efforts is to ensure community understanding, engagement, ownership and implementation of prevention control measures through effective social mobilization, communication and engagement intervention.

Media platforms such as radio, TV, social media can communicate preventive, life-saving and risk-mitigating information rapidly and efficiently to crisis-affected communities on a large scale and help countries at risk prevent any possible outbreak; this form of communication will support the BRC's engagement of critical actors in behavioural and social interventions centred in community participation efforts through the activation of media programmes, production of locally-adapted communication material and the coordination and cross-fertilization of approaches and strategies.

### **Security**

Due to insecurity and violence in Brazil, all National Society staff that participate in operational activities will receive a security briefing from the National Society's Risk Management Department according to the BRC's "*Fique Seguro*" Manual, which is based on the IFRC's Stay Safe manual and Safe Access methodology. A security plan will also be developed for the operation. Lastly, the ICRC delegation recommends including an analysis of the context for each work zone in the safety plan and incorporating the content into the security briefings for all BRC staff.

Due to the risk of acquiring yellow fever, all staff and volunteers who participate in the operation must have the yellow fever vaccine, especially those who will carry out activities in hot zones, in which case the vaccine must be applied at least 10 days before the realization of the activity. Likewise, all personnel will be duly uniformed and insured<sup>6</sup>, and they will use personal protective items (please see the list of items below) to carry out activities, which will only take place during the day:

Individual protective equipment for community activities.

- BRC cap.
- BRC long sleeve polo.
- Face masks.
- Nitrile gloves.
- Sun screen.
- Repellent.

In order to carry out the activities there will be coordination with the communities and with local health departments and authorities.

Considering that some activities will take place in distant municipalities and rural areas, the field team will need to carry a first aid kit in case of emergency.

### **Planning, monitoring, evaluation, and reports (PMER)**

The National Society's Humanitarian Programs and Risk Management Department, branches and Volunteer and Youth Departments, and the operations team will conduct the operational planning, monitoring and evaluation, and develop the reports; the IFRC's Zika team and RIT will provide support as needed.

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<sup>6</sup> All 400 volunteers participating in this operation will be locally insured through the DREF.

A meeting will be held in the BRC's headquarters in Rio de Janeiro to explain the operation's implementation, and BRC's headquarters will carry out subsequent field visits at the operations midway point for monitoring; the IFRC's ARO will also conduct monitoring field visits to support the NS.

The frequency of reporting and monitoring will be as follows

- During the first month of operation: 1 weekly report.
- During the second month of operation: 1 report every 2 weeks.
- During the third month of operation: 1 operational report in total.

Satisfaction surveys will be carried out with beneficiaries to evaluate the operation's effectiveness and to adjust the operational strategy if necessary.

### **Administration and finances**

The Brazilian Red Cross has a permanent Administration and Finances Department and an internal auditor to ensure the adequate management of financial resources in accordance with the memorandum of understanding between the National Society and the IFRC. Financial resources will be handled in accordance with the National Society's regulations and DREF guidelines.

In keeping with DREF procedures, the operation will only cover expenses incurred during the three-month operation; it will not cover permanent structural costs.



A BRC volunteer conducts an ODK registration in the municipality of Setubinha in the state of Minas Gerais. Source: BRC

## C. DETAILED OPERATIONAL PLAN

### Health and Care

#### Needs Analysis:

The highest number of cases and deaths due to yellow fever are in municipalities with limited resources in Minas Gerais (Teófilo Otoni, Itambacuri, Poté, Ladainha, Setubinha and Novo Cruzeiro) and Espírito Santo and Sao Paulo in rural areas with high levels of diseases transmitted by *Aedes aegypti*. The need to sensitize population on vaccination and for health authorities to continue with prevention and vector control actions despite scarce municipal resources in the country's south-eastern region demonstrates the importance of strengthening the health authorities' actions.

The following actions were established to reduce the transmission of yellow fever and other diseases transmitted by *Aedes aegypti*.

- Inform people on the importance of vaccination, knowing the signs and symptoms of the disease and accessing health institutions to reduce mortality and morbidity when a person is presenting signs of the disease.
- Train community health agents in health departments on yellow fever control and improve their actions in urban and rural areas.
- Identify and map people who have yet to be vaccinated against yellow fever, reinforce community-based monitoring strategies within the affected communities.
- Carry out prevention campaigns in schools; children can multiply prevention messages in their homes.
- Train community health agents in health departments on psycho-social support during epidemics.
- Improve individual and family protection measures for vulnerable populations with repellents, LLITNs and protective netting for water containers.

#### Population to be assisted:

At least 26,100 people (6,525 families) in the most affected municipalities have their risk of yellow fever and diseases transmitted by *Aedes aegypti* reduced; of these beneficiaries, at least 650 families (2,600 people or 10 per cent of the beneficiary families) receive psycho-social support in epidemics messages.

Objective	Indicators
<b>Outcome 1 The risk of yellow fever and diseases transmitted by <i>Aedes</i> is reduced through key messages about prevention and control measures, and people affected by yellow fever receive psycho-social support messages.</b>	N° of people by sex and age that receive prevention and control messages against yellow fever. N° of people by sex and age that receive psycho-social support through epidemics messages.
<b>Output 1.1</b> At least 6,525 families improve their prevention and control measures against yellow fever.	N° of staff and volunteers trained in the control of epidemics. N° of community health agents and leaders trained in control of epidemics. N° of teachers and students who participate in prevention and control activities against yellow fever. N° of home visits carried out. N° of school activities held.

		N° of people distributed by gender and age that receive individual and family protection elements.											
Output 1.2 At least 650 families (2,600 people) receive psycho-social support messages in the affected communities.		N° of staff and volunteers trained in psycho-social support in epidemics. N° of psycho-social support activities carried out.											
Activities	Weeks	1	2	3	4	5	6	7	8	9	10	11	12
Volunteer training in control of epidemics.													
Workshop on yellow fever prevention and control with community health personnel, community leaders and other relief and volunteer groups													
Home visits on yellow fever prevention and control measures.													
Educational activities about yellow fever prevention and control measures.													
Implement campaigns on yellow fever prevention and control measures (bus stations, markets) and in the media													
Hand out individual and family protection measures (repellent, LLITNs and protective netting for water containers)													
Workshop on psycho-social support in epidemics for volunteers and community health agents													
Psycho-social support activities for the affected communities													

## Water, sanitation and hygiene promotion

### Needs Analysis:

In February and May, there is increased rain in Brazil; thus, this period is conducive to the proliferation of mosquitoes in both natural reservoirs and containers, which can increase the number of yellow fever cases in unvaccinated people and the number of other diseases transmitted by the *Aedes aegypti* mosquito. Furthermore, Brazil's south-east is one of its most tropical regions, and it also has the greatest social inequality, which means that some communities do not have suitable sanitation conditions, making them even more vulnerable to disease outbreaks; since most affected communities are rural and dispersed communities, strengthening vector control actions has been proposed.

The following needs have been identified:

- Strengthen community health agents through the delivery of vector control kits to conduct actions to eliminate mosquitoes in the departments of in urban and rural areas; the kits will allow for the control of vectors even after the operations ends.
- Elimination of mosquito-breeding grounding through community engagement
- Monitor mosquito-breeding grounds to show trends

### Population to be assisted:

At least 26,100 people (6,525 families) in the most affected municipalities, reduce their risk of yellow fever and diseases transmitted by the *Aedes aegypti* mosquito through sanitation activities and the elimination of the mosquito-breeding grounds with the support of volunteers and community health agents.

Objective	Indicators												
<b>Outcome 2 The risk of transmission of yellow fever and other diseases transmitted by the <i>Aedes aegypti</i> mosquito is reduced through hygiene practices and vector control focused on the elimination of mosquito-breeding grounds.</b>	N° of people distributed by gender and age that participate in hygiene and vector control campaigns.												
<b>Output 2.1</b> At least 26,100 people (6,525 families) in the most affected municipalities reduce their risk of yellow fever and diseases transmitted by the <i>Aedes aegypti</i> mosquito through sanitation and vector control activities and the elimination of the mosquito-breeding grounds	N° of volunteers who participate in sanitation activities. N° of community health agents that participate in sanitation activities. N° of teachers and students who participate in sanitation activities. N° of community members in at-risk zones that participate in sanitation activities. N° of sanitation activities held. N° of mosquito breeding grounds eliminated N° community health agents that receive vector control kits. N° of volunteers who participate in the campaigns. N° of campaigns implemented.												
Activities	Weeks	1	2	3	4	5	6	7	8	9	10	11	12
Purchas and delivery of sanitation kits to 13 communities, 13 schools and 6 branches in 10 municipalities													
Purchas and delivery of vector control kits to 200 community health agents													
Sanitation campaigns in schools													
Sanitation campaigns in communities													
Sanitation campaigns in BRC branches													

The contents of the community/school sanitation kits are the following:

Quantity	Item
1	Megaphone with batteries
2	Wheelbarrows
3	Square-ended shovels
3	Pickaxes
3	Rakes
5	Pairs of plastic boots
5	Boxes of vinyl gloves (100 units)
5	Boxes of face masks (50 units)
10	Packages garbage bags (100 units)

The contents of the sanitation kits for the branches are the following:

Quantity	Item
1	Megaphone with batteries
2	Wheelbarrows
3	Square- ended shovels
3	Pickaxes
3	Rakes
5	Pairs of plastic boots
5	Boxes of vinyl gloves (100 units)
5	Boxes of face masks (50 units)
10	Packages of garbage bags (100 units)
2	Dome tents

The contents of the vector control kits for the community health agents are the following:

Quantity	Item
1	Tarpaulin
1	Flashlight
2	Sets of batteries
1	Clipboard
2	Mechanical pencils
20	Pairs of latex gloves
1	Strainer for fish larvae
1	Unit of repellent
2	Unit of sun screen
2	Droppers
2	Vials
1	Large plastic spoon
1	Small plastic container

### Quality programming /common areas for all sectors

The activities established for the common areas will ensure a field evaluation, facilitate access to communities, carry out community based monitoring in selected communities, raise 50,000 people's awareness on yellow fever prevention measures through communications campaigns and the execution of operational monitoring by the National Society with support from the IFRC.

Objective	Indicators
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## Contact information

**For further information, specifically related to this operation please contact:**

### **In Brazil:**

- Roseli Pimentel Sampaio, president of the Brazilian Red Cross, phone: +55 21 983920101; email: [gabinete@cvb.org.br](mailto:gabinete@cvb.org.br)

### **In IFRC office in Peru:**

- Pabel Angeles, regional disaster management coordinator for South America – IFRC, email: [pabel.angeles@ifrc.org](mailto:pabel.angeles@ifrc.org)

### **In IFRC Regional Office for the Americas:**

- Carlos Inigo Barrena, head of Disaster and Crisis department, phone: +507 317 3050; email: [ci.barrena@ifrc.org](mailto:ci.barrena@ifrc.org).
- **Regional Logistics Unit (RLU):** Mauricio Bustamante, Regional Logistics coordinator, phone: +507 317 3050; email: [mauricio.bustamante@ifrc.org](mailto:mauricio.bustamante@ifrc.org)
- Diana Medina, regional communications manager; email: [diana.medina@ifrc.org](mailto:diana.medina@ifrc.org)

**In Geneva:** Cristina Estrada, response and recovery lead, phone: +41.22.730.4529, email: [cristina.estrada@ifrc.org](mailto:cristina.estrada@ifrc.org)

### **For Performance and Accountability (planning, monitoring, evaluation and reporting enquiries):**

- Priscila Gonzalez, planning and monitoring coordinator, phone: +507 317 3050; email: [priscila.gonzalez@ifrc.org](mailto:priscila.gonzalez@ifrc.org)

### **For Resource Mobilization and Pledges:**

- Julie Hoare, head of Partnership and Resource Development (PRD), phone: +507 317 3050; email: [julie.hoare@ifrc.org](mailto:julie.hoare@ifrc.org)

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# DREF OPERATION

MDRBR008 - Brasil Yellow fever

20/03/2017

DREF Grant  
Budget CHF

Budget Group	DREF Grant Budget CHF
Shelter - Relief	0
Shelter - Transitional	0
Construction - Housing	0
Construction - Facilities	0
Construction - Materials	0
Clothing & Textiles	18,206
Food	0
Seeds & Plants	0
Water, Sanitation & Hygiene	33,378
Medical & First Aid	1,821
Teaching Materials	47,437
Ustensils & Tools	0
Other Supplies & Services	0
Cash Disbursements	0
<b>Total RELIEF ITEMS, CONSTRUCTION AND SUPPLIES</b>	<b>100,843</b>
Land & Buildings	0
Vehicles	0
Computer & Telecom Equipment	0
Office/Household Furniture & Equipment	0
Medical Equipment	0
Other Machinery & Equipment	0
<b>Total LAND, VEHICLES AND EQUIPMENT</b>	<b>0</b>
Storage, Warehousing	0
Distribution & Monitoring	4,046
Transport & Vehicle Costs	10,013
Logistics Services	0
<b>Total LOGISTICS, TRANSPORT AND STORAGE</b>	<b>14,059</b>
International Staff	5,563
National Staff	0
National Society Staff	26,096
Volunteers	19,319
Other Staff Benefits	0
<b>Total PERSONNEL</b>	<b>50,978</b>
Consultants	0
Professional Fees	3,034
<b>Total CONSULTANTS &amp; PROFESSIONAL FEES</b>	<b>3,034</b>
Workshops & Training	7,283
<b>Total WORKSHOP &amp; TRAINING</b>	<b>7,283</b>
Travel	6,069
Information & Public Relations	1,062
Office Costs	3,186
Communications	1,517
Financial Charges	506
Other General Expenses	0
Shared Office and Services Costs	0
<b>Total GENERAL EXPENDITURES</b>	<b>12,340</b>
Partner National Societies	0
Other Partners (NGOs, UN, other)	0
<b>Total TRANSFER TO PARTNERS</b>	<b>0</b>
Programme and Services Support Recovery	12,255
<b>Total INDIRECT COSTS</b>	<b>12,255</b>
<b>TOTAL BUDGET</b>	<b>200,791</b>



# Brazil: Yellow Fever outbreak

