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Emergency Plan of Action Final Report

Zambia: Cholera Outbreak Lusaka

International Federation of Red Cross and Red Crescent Societies

DREF operation	**Operation n° MDRZM011**
Date of Issue: 25 June 2018	**Glide number: EP-2017-000178-ZMB**
Date of disaster: 06 October 2017	
Operation start date: 15 December 2017	**Operation end date: 18 April 2018**
Host National Society(ies): Zambia Red Cross Society	**Operation budget: CHF 248,705**
Number of people affected: 1,140,638 people	**Number of people assisted: 200,000 people**
N° of National Societies involved in the operation: Zambia Red Cross Society (ZRCS), Netherlands Red Cross (NLRC) and International Federation of Red Cross and Red Crescent (IFRC).	
N° of other partner organizations involved in the operation: Ministry of Health (MOH), United Nation Children´s Emergency Fund (UNICEF), Save the Children Zambia (SCZ), Ministry of local Government, Disaster Management and Mitigation Unit (DMMU), World Health Organisation (WHO), Lusaka City Council, Lusaka water and sewerage (LWSC), Discover Health, OXFAM, World Bank, World Vision and Water Aid.	

A. SITUATION ANALYSIS

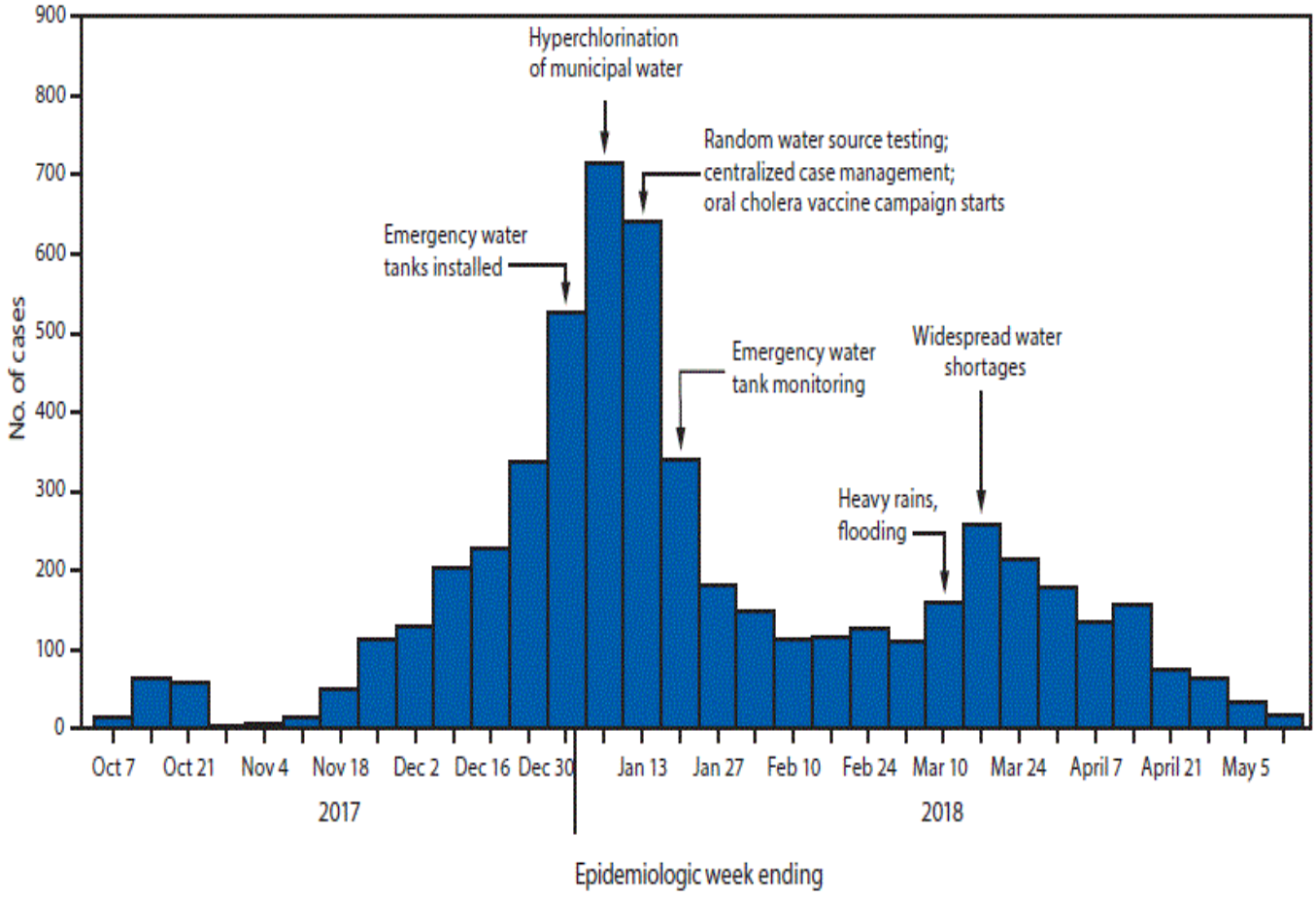
Description of the disaster

Cholera is endemic to Zambia and outbreaks occur almost every year in Lusaka, Southern, Northern and Luapula provinces. The 2017/2018 cholera outbreak was declared on 6th October 2017 after a laboratory confirmation of two initial cases reported by Chipata Level One Hospital on 4th October 2017. This year, the outbreak happened just before the rainy season which is unusual, but it followed a period of inadequate water supply during the summer period. With inadequate water supply more people are forced to use unsafe water. This was the main driver of the recent outbreak. By December 2017, the outbreak spread to other parts of Lusaka namely: Garden Chilulu, Kabanana, Ngombe, Chipata, Kanyama, Chibolya, Bauleni, Matero, Mazyopa, John Laing, Makeni villa, Chazanga, Jack, Mandevu, Kuomboka, Zingalume, Twikatane, Chunga, and Zanimuwone with Chipata and Kanyama being the most affected. As such, on 15 December 2017, IFRC launched a DREF operation for CHF 222,351 to contribute to the reduction of mortality and morbidity linked to cholera disease outbreak within the affected communities of Lusaka province, through the provision of health services, clean and safe water supply, sanitation and hygiene activities to about 70,000 people (14,000 households).

With intensification of the rains, new cases raised on a daily basis reaching a peak on the first week of January 2018 with over 700 cases reported *(See figure 1).* As the results of robust intervention by the government and its partners, including ZRCS, the epidemic declined significantly between epidemiological weeks 2 and 5 (2018) recording about 100 new cases per day by end of February 2018.

Nonetheless, cholera cases started to rise again in epidemiological week 10 recording more than 200 cases. In response, an Operation Update was published on 06 March 2018, summarizing the progress made and the new needs on the ground and extending the operation timeframe until 18 April 2018. The Operation update also revised the number of targeted people from 70,000 to 200,000 and the operation was granted an additional allocation of CHF 26,354, to support supplementary costs for volunteer incentives as they conducted door to door hygiene promotion. The overall budget for this operation was thus brought to CHF 248,705.

Thanks to this response operation, as well as the commitment of ZRCS volunteers and partners of the ZRCS, the outbreak started decreasing continuously from end of March to May 2018 when new cases were recorded in single digits. By 25th March 2018 when DREF operation activities were being rounded up, Lusaka recorded 19 new cases with a cumulative total of 4,768 and 89 deaths while national cumulative totals were 5,190 new cases and 103 deaths[1]. Looking at the current trend of the epidemic, supported by trends[2] from previous years, the 2017/18 cholera outbreak in Zambia was confirmed combated by end of May 2018. With the outbreak showing signs of being contained, the government, through the Ministry of Health started to loosen some restrictions, e.g. the National Heroes stadium which was the main cholera treatment centre (CTC), has ceased its activities and reverted to its usual purpose. The figure below is a histogram showing the number of reported cholera cases and related events, by week, in Lusaka, Zambia, during October 2017–May 2018.



Number of reported cholera cases and related events, by week — Lusaka, Zambia, October 2017–May 2018[3]

The major donors and partners of the Disaster Relief Emergency Fund (DREF) include the Red Cross Societies and governments of Australia, Austria, Belgium, Britain, Canada, Denmark, Finland, Ireland, Italy, Japan, Luxembourg, Monaco, the Netherlands, Norway, Spain, Sweden and the USA, as well as DG ECHO, the UK Department for International Development (DFID), AECID, the Medtronic and Zurich Foundations and other corporate and private donors. On behalf of the Zambia Red Crescent Society (ZRCS), the IFRC would like to extend its gratitude to all partners for their generous contributions.

[1] *Zambia Cholera SitRep – March 2018 (MOH)*

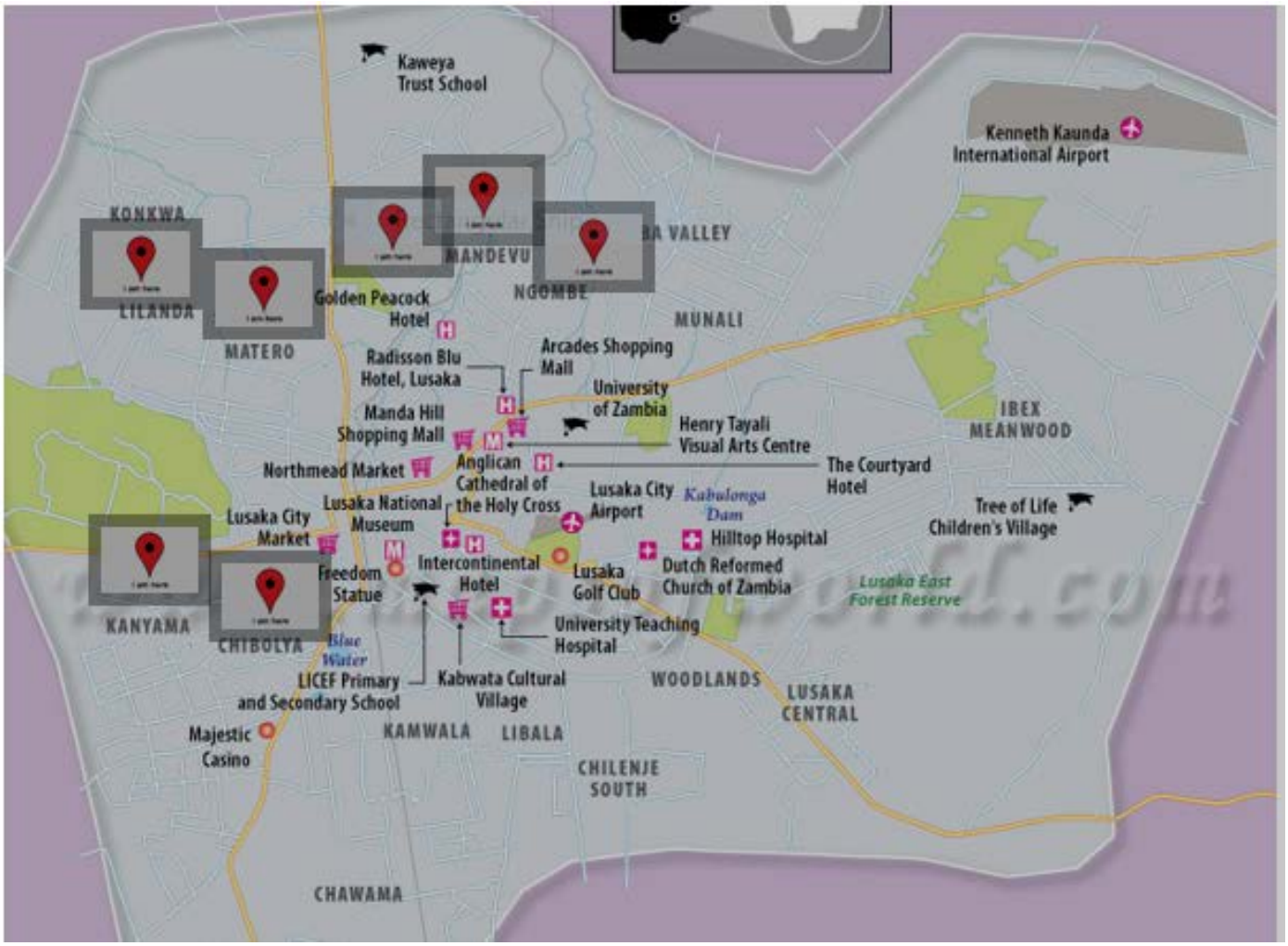
[2] MSF: Lusaka's annual cholera disaster: Practical steps for a more effective response.

[3] Center for Disease Control and Prevention; Cholera Epidemic — Lusaka, Zambia, October 2017–May 2018 Available on https://www.cdc.gov/mmwr/volumes/67/wr/mm6719a5.htm

Summary of response

Overview of Host National Society

Following declaration of cholera epidemic by the Ministry of Health, Zambia Red Cross Society quickly mobilized and deployed 150 volunteers on 15th October 2017 to conduct door to door hygiene promotion in three affected sub-districts of Chipata, Kanyama and Bauleni. These 150 volunteers continued with hygiene promotion from 15th October until 30th November 2017.



Map of Lusaka showing area of intervention of ZRCS Volunteers

The worsening of the epidemic necessitated a scale up of the preventive and control interventions. By 1st December 2017, ZRCS in close coordination with the Ministry of Health (MoH) and the Disaster Management and Mitigation Unit (DMMU) under the Office of the Vice President increased the number of volunteers to 1,500, financially supported by MoH. To meet this number, ZRCS had to recruit new volunteers. The 1,500 volunteers facilitated the distribution of liquid chlorine while conducting door-to-door hygiene promotion for 18 days. After that, the number of volunteers was scaled down to 300 because MoH withdrew its financial support. The remaining 300 volunteers carried out health promotion as part of this DREF operation from 19th Dec 2017 until end of March 2018 when activities ended.

The 300 ZRCS volunteers convened at health facilities (Command Centres) every day before being assigned to various areas of operation depending on the evolution of the epidemic as guided by the MOH. Volunteers were deployed by groups of 10, headed by a group leader who consolidated group reports daily. Each volunteer had a daily target of 15 households and a total of 92,294 households were reached. Group reports, which also contained feedback from the communities, were then submitted to the Volunteer Aid Unit (VAU) leader who consolidated reports for the whole sub-district.

At this stage, consolidated reports were submitted to the Health and Care Manager of ZRCS and a copy sent to MoH through incident command centre. The Health and Care Manager then analysed the reports, provided feedback to volunteers and shared insights with MoH and other stakeholders.

Some 242,000 people were provided with knowledge on hygiene and sanitation, which included importance and critical times of hand washing, excreta disposal, safe source, appropriate storage of drinking water, food hygiene and waste management; See ANNEX 1 - Key Messages used during door to door hygiene promotion to control the cholera epidemic in Lusaka (2017/2018).

ZRCS Volunteers conducting door to door hygiene promotion © Zambia RC

Great emphasis was put on ensuring that community members drew water from safe and protected sources because the main driver of cholera epidemic was consumption of contaminated water. It was observed that some members of the communities depended on shallow wells as main source of water but with the engagement of ZRCS volunteers as well as multisector efforts, spearheaded by the government line ministries, more people had access to clean and safe water drawn from the taps, kiosks and communal water tanks placed in strategic points within the community. Household purification of drinking water either by boiling or use of chlorine was also emphasised through door to door sensitization. With the continued engagement of community members and supply of chlorine, 74% of households visited indicated that they treated their drinking water by either adding liquid chlorine or boiling. This was calculated from the data collected by volunteers during the operation monitoring.

Majority of households visited stored drinking water in wide-mouth buckets, which though covered, could allow contamination at the point of use. Therefore, storage of drinking water in a narrow-mouthed container was equally one of the key messages provided to communities for preventing contamination at point of consumption.

Overview of Red Cross Red Crescent Movement in country

The International Federation of Red Cross and Red Crescent societies is not present in the country. Nonetheless, IFRC supported the National Society (NS) through the DREF allocation as well as deployment of a health RDRT who worked with the NS for a period of one month (January 10th to 9th February 2018). Key inputs that ZRCS benefitted from the RDRT mission included:

- Facilitation of a mobile data collection training using Kobo toolbox to Zambia RC volunteers and staff, which saw phasing away of paper-based household monitoring surveys as well as better tracking and management of field data.
- Support the revision of hygiene promotion door-to-door survey questionnaire.
- Support in volunteer management and revising DREF to reflect target population based on number of volunteers.

Additionally, the Netherlands Red Cross (NLRC) which has been in the country supporting the NS with long term development projects and for this operation, supported ZRCS by providing funds (12,000 Euros) to conduct training and deploy 75 hygiene promotion champions for a period of 10 days as well as providing them with Personal Protective Equipment (PPEs). Financial support from the NLRC meant for IEC materials was reallocated to support volunteer operations and as such, IEC materials were not procured under NLRC budget but under DREF budget.

Zambia Red Cross Society is part of the Technical Working Group (TWG) on hygiene promotion coordinated by the Ministry of Health. Coordination meetings were internally held in country within the National Society departments and the Netherlands Red Cross, the only partner National Society (PNS) present in Zambia. Similarly, coordination meetings were held through Skype between technical departments of the National Society and IFRC's Southern Africa Country

cluster support team, Africa Region. The situational reports on the outbreak from Ministry of Health were also shared with the IFRC Southern Africa Cluster office.

Overview of non-RCRC actors in country

The government of the Republic of Zambia, through the Ministry of Health, took stringent measures to curb the epidemic through a vigorous multi-sectorial response which led to massive cleaning of the Central Business District (CBD) and markets, closure of non-compliant eating places, trading areas and restriction of gatherings, and administration of the Oral Cholera Vaccine (OCV). The Ministry of Health took a leading role in coordination, surveillance, contact tracing and curative interventions while receiving technical support from line ministries and various agencies. Response from other actors included the following:

ORGANIZATION	ACTIVITIES
UNICEF	• Provided granular chlorine (7,000 kg). • Supported development of multi-sectorial response plan and sector coordination. • Hygiene promotion. • Supported integrated disease surveillance and response. • Provided vehicles, cholera treatment and prevention kits, supplies for diagnosis and information/communication materials. • Supported MOH with water quality monitoring and testing (water trucks, bucket chlorination).
World Bank	• Sanitation and hygiene promotion (developed a rapid communication package around the epidemic). • Supported on emergency pit emptying operation in George Compound targeting a total of 1,000 toilets and temporary (3 month) waiver of fecal sludge dumping fees charged to private pit/septic tank service providers. • Provided sewer cleaning equipment (purchased laboratory equipment and reagents for LWSC and MOH and other operating costs related to cholera emergency).
World Vision	• Provided liquid chlorine (13,000 bottles x 750 ml).
OXFAM	• Provided household chlorine for purification of water at point-of-use (10, 000 Bottles). • Public Health Promotion. • Community mobilization and IEC material for awareness.
WHO	• Offered technical/financial support to Ministry of Health for surveillance, case management and OCV.
Save the Children Zambia	• School hygiene promotion
Lusaka City Council	• Buried of shallow wells, emptied latrines and septic tanks, collected garbage, inspected of public places and markets.
Lusaka water and Sewerage Company	• Supplied free water through kiosks and portable water tanks in affected areas.

Needs analysis and scenario planning

Monitoring was done regularly by the National Society staff and IFRC team, with adherence to IFRC's standard guidelines. The monitoring team ensured objectives were achieved based on the designed response plan. Operational update on the progress against objectives as well as any changes in operation was internally discussed and shared with IFRC for input and approval. ZRCS was part of the technical working group on hygiene promotion and community mobilization coordinated by the Ministry of Health. Further, the NS participated in weekly multisector coordination meetings that involved various actors coordinated by both the Ministry of Health as well as the Disaster Management and Mitigation Unit (DMMU) under the Office of the Vice President. The use of KOBO in needs assessment in this operation was of great benefit in that information was collected and shared in real time.

Weekly monitoring reports suggested that people were receptive to hygiene messages and improved on hygiene practices, thereby contributing to control the cholera epidemic. ZRCS efforts in this operation were recognized and commended by the Ministry of Health during coordination meetings.

Risk Analysis

As the rains intensified, some households within operation area were difficult to reach due to flooding and poor drainage system. To mitigate this challenge, ZRCS procured and distributed gum boots and rain coats to the 300 hygiene promoters for their deployment to these areas. Each volunteer received a pair of gum boots and rain coats to prevent contamination as well as facilitating the volunteers to access the affected areas with less difficulties.

B. OPERATIONAL STRATEGY

Proposed strategy

The DREF Operation lasted for four months (December to April 2018) focusing on WASH related support to the most vulnerable populations and assisted 242,000 people. The overall objective of this operation was "To contribute to the reduction of mortality and morbidity linked to cholera disease outbreak within the affected communities in Lusaka province, through the provision of health services, clean and safe water supply, sanitation and hygiene activities".

To achieve that objective, ZRCS through DREF operation focused on:

- Community mobilization and sensitization through the deployment of 300 volunteers who conducted door to door hygiene promotion from December 2017 until March 2018. Some 100 volunteers were in each of the following sub - districts; Chipata, Matero and Kanyama respectively to enhance awareness and behaviour change.
- Refresher training on Hygiene Promotion to hygiene promoters was conducted to enhance their knowledge and capacity in delivering effective hygiene promotion. To ensure safety and ease the operations, volunteers were also supplied with personal protective gears.
- Procurement of 38,880 bars of hygiene soap (30,000 tablets were distributed to 30,000 households through the Ministry of Health) while 8,880 bars were kept as prepositioned stock.
- Procurement and distribution of 40,000 x 750ml bottles of chlorine for household water purification (30,000 bottles were distributed to 30,000 households through the Ministry of Health). Some 10,000 bottles were kept as prepositioned stock at the National Head Quarters.
- Purchased and donated 8,000 sachets of ORS to the Ministry of Health.
- Printing and distribution of 6,000 pieces of IEC materials through the Ministry of Health.
- Monitoring of Hygiene Promotion activities by hygiene promoters using Kobo Toolbox (mobile data collection tool).
- In conjunction with Save the Children Zambia, the NS conducted school-based hygiene promotion activities in 52 selected community schools of Kanyama sub district.
- Collaborated with other actors and the Ministry of Health in planning, implementation, monitoring and evaluation of interventions to enhance coordination and complementarity.

C. DETAILED OPERATIONAL PLAN

Water, sanitation and hygiene

People reached: 242,000 People

Male: 111,320

Female: 130,680

Outcome1: Vulnerable people have increased access to appropriate and sustainable water, sanitation and hygiene services.		
Indicators:	**Target**	**Actual**
Number of people reached with community-based disease prevention and health programming	14,000	92,294
Number of people reached by NS with services to reduce relevant health risk factors	200,000	242 000
Output 1.1: NS promote positive behavioural change in personal and community hygiene among targeted communities.		
Indicators:	**Target**	**Actual**

Number of households reached with hygiene promotion messages through door to door campaign.	14,000	92,294
Number of people reached with hygiene promotion activities through door to door campaign.	200,000	242,000
Number of volunteers deployed to conduct hygiene promotion.	1,500	300
Mobilize and train 1,500 volunteers in emergency hygiene promotion.	1,500	300
Produce IEC materials.	5,000	6,000
Procure and distribute liquid chlorine for domestic water purification accompanied with education on how to use chlorine.	40,000	30,000
Train volunteers in community engagement and accountability (CEA)	300	Not done
Procure and distribute hygiene soap for hand washing.	40,000	38,880
Procure and distribute ORS in conjunction with the Ministry of Health.	5,000	8,000
Train volunteers on case detection and referral while distributing ORS.	300	300
Continuously monitor the water, sanitation and hygiene situation in targeted communities.		Done

Output 1.2: Communities are provided by NS with improved access to safe water.

Indicators:	Target	Actual
Determine the appropriate method of household water treatment for each community based on effectiveness and user preference.	-	Done
Monitor use of water treatment products and user's satisfaction through household surveys and household water quality tests.	3 sub-districts	Done (except water quality test)

Narrative description of achievements

To enhance proper hand washing practice, ZRCS through the DREF procured 38,880 units of 175g hygiene soap, of which 30,000 bars were distributed to 30,000 households under the coordination of the Ministry of Health with the support of ZRCS volunteers while 8,880 were kept at the NS Head Quarters as preparedness stock. The purpose of reserving part of the soap was to assess how initial stock donated to the MoH would be managed and the prepositioned stock would only be released when and if the need was ascertained. After distributions, assessment showed that all needs were covered therefore, at the time of this report, 8,880 units of 175g hygiene soap are still in ZRCS preparedness stocks.

It should be highlighted that all distributions were done under the sole coordination of the Ministry of Health. This was a request from the Ministry itself during the stakeholders' coordination meetings. All partners were asked to provide their stock information to one coordination body (MoH), to avoid parallel distributions, hence duplication. Staff and volunteers were made available for joint distributions also conducted under the coordination of Ministry of Health.

To ensure that vulnerable households had access to safe drinking water, ZRCS procured 40,000 x 750ml of chlorine; from this quantity, 30,000 bottles were donated to Ministry of Health for distribution to most affected areas for domestic water purification while 10,000 bottles of chlorine were kept as preparedness stock. Keeping this contingency stock was necessary since the Ministry of Health, after the procurement was been completed, already received more chlorine than necessary. Their stock was sufficient to cover the operational needs as many other actors provided the same commodity. Therefore, ZRCS kept the prepositioned stocks, which will be released to the Ministry of Health at any time as need arises. ZRCS volunteers assisted with the chlorine distribution while the stock was managed by the MOH to avoid duplication and parallel distribution with other actors.
Domestic water purification using liquid chlorine was identified, through the Ministry of Health, as one of the most effective way of ensuring that majority of people in affected areas have access to clean and safe water in such an emergency. Water was supplied through water trucking and water tanks located at strategic points of affected areas by Ministry of Local Government in collaboration with Ministry of Health as well as Ministry of Sanitation and Water Development.

ZRCS did not conduct household water quality testing due to short supply of pool testers in the country, while efforts to have them procured outside the country were aborted as time ran out. Nonetheless, MoH with support from UNICEF, conducted water quality monitoring of water tanks and bowsers.

ZRCS undertook the continuous monitoring of water, sanitation and hygiene situation in targeted communities through its volunteers. Initially, monitoring was done through hard copy questionnaires until the training of volunteers on Kobo by the health RDRT and mobile data collection was embraced. Various WASH related indicators were uploaded and

reported on. The Health and Care Manager accessed data in real time and generated reports, Nonetheless, only volunteers who had smart phones used Kobo since ZRCS did not procure phones for this operation.

Community Engagement and Accountability (CEA) training for volunteers, which was supposed to be embedded in the refresher HP training, was not carried out due to the lack of a CEA focal point to facilitate the training and support continuation and follow up of the activities even after the departure of the health RDRT. There is therefore still a need to train NS staff in CEA, particularly in set up and management of feedback systems and rumour management in such operations.

Some 8,000 sachets of Oral Rehydration Salt (ORS) were procured and supplied to the Ministry of Heath to facilitate treatment and recovery of people infected. Three hundred (300) volunteers also supported the distribution of the ORS after they underwent a training on how to detect new cholera cases and refer them to health facilities.

To ensure that volunteers were protected to implement activities, the programme procured 225 sets of rain coats and gum boots while the other 75 were supplied under the NLRC support. Volunteers were also supplied with 220 ZRCS branded bibs for visibility and identification purposes.

Six thousand (6,000) pieces of IEC materials (3,000 brochures and 3,000 posters) were procured and used to disseminate cholera prevention and control information in the three most affected areas; Matero, Kanyama and Chipata compounds.

Challenges

The request for 1,500 volunteers by the Disaster Management and Mitigation (DMMU) unit under the Office of the Vice President to beef up the operation was beyond existing pool of ZRCS volunteers. The recruitment process was rushed and compromised on the quality of volunteers recruited, although this recruitment was necessary to meet the request of the DMMU. Recruitment exercise was done by ZRCS local branch of Lusaka through the Volunteers Aid Units at community level. A total of 1,500 volunteers were recruited and deployed for 18 days (1st to 18th December 2017).

Lessons Learned

Rushed recruitment of volunteers' compromise quality of service. Therefore, there is a need for ZRCS to solicit funds for continuous recruitment, maintain and training of volunteers in pre-outbreak phase in hotspots including Lusaka.

International Disaster Response

Outcome 2: Effective and coordinated international disaster response is ensured.

Output 21: Effective response preparedness and NS surge capacity mechanism is maintained.

Indicators:	Target	Actual
Deployment of Health RDRT.	1	1

Output 2.2: IFRC produces high-quality research and evaluation that informs advocacy, resource mobilization and programming.

Indicators:	Target	Actual
Continued assessments in collaboration with Ministry of health and other partners.	2	2
Coordination meetings and information sharing with other implementing partners.	12	24
Monitor implementation of operational activities.	12	9
Lessons learnt workshop.	1	1

Narrative description of achievements

RDRT Mission

To support Zambia Red Cross in the management of the Health and WASH activities related to this DREF Operation in response to the 2017/2018 Cholera outbreak in Lusaka, IFRC deployed a RDRT Health from 12th January to 11 February 2018. Key outputs of the RDRT mission included the following:

- Facilitated a mobile data collection training using Kobo toolbox to Zambia RC volunteers and staff, to replace the paper-based household monitoring surveys using mobile date, speed up the data collection and analysis as well as better tracking and management of field collected information.
- Supported the revision of hygiene promotion door-to-door data collection tool.

- Supported the volunteer management and revision of the DREF operation to reflect target population based on volunteer numbers.
- Participated in coordination meetings with MoH and other partners (UNICEF, Water Aid, and Save the Children) and ensured visibility of Red Cross activities – these activities have now been included in the daily MoH SitReps.
- Participated in bilateral coordination meetings with Save the Children Zambia that led to Save the children financially supporting HP in Schools in collaboration with ZRCS, MoH and Ministry of General Education.
- Facilitated hygiene promotion refresher training for volunteers. An initial training was held in 2017 for 75 volunteers, supported by NLRC, however with the help of the RDRT a need for a refresher training for 300 volunteers was identified given their limited training on Hygiene Promotion and cholera.

Continued assessments in collaboration with Ministry of health and other partners.
ZRCS conducted continuous assessment in collaboration with the Ministry of Health through its volunteers who collected data covering specific indicators on daily basis. Insights from the reports were shared with the Ministry of Health. Further, information gathered through volunteer reports was used to realign the operation to enhance results.
In collaboration with MoH, Ministry of General Education (MoGE) and Save the Children Zambia (STC), ZRCS also undertook a joint assessment of 52 schools in Kanyama Sub District to ascertain hygiene and sanitary conditions. This assessment followed the training and establishment of school hygiene and sanitation clubs in the same targeted schools. The assessment was undertaken by teams representing ZRCS, STC, MoH and MoGE to enhance complementarity and ensure sustainability of activities. The tripartite assessment helped to evaluate the extent to which selected schools had rolled out school lead hygiene and sanitation activities. The assessment also provided an opportunity to observe general hygiene and sanitary environment in schools, give appropriate support and recommendations to enhance conducive learning environment to protect learners and teachers from contracting cholera and other WASH related diseases.

Coordination meetings and information sharing with other implementing partners.
ZRCS planned to participate in at least 12 coordination meetings (one meeting per week) from December 2017 to March 2018. As the epidemic worsened, frequent coordination meetings with the Ministry of Health and other stakeholders became necessary as such, total of 24 meetings were attended. These meetings included daily multisector situation update and planning meeting chaired by the Minister of Health or Permanent Secretary from December 2017 until February 2018. The stakeholder meetings hosted and chaired by Disaster Mitigation and Management Unit (DMMU), focused on Health Promotion, Epidemic Preparedness, Prevention and Response.

Monitor implementation of operational activities
ZRCS deployed volunteers by groups of 10, each managed by a group leader who compiled reports on daily basis. Group reports were then submitted to the Volunteer Aid Unit (VAU) leader who consolidated reports for the whole sub-district or compound. At this point, consolidated reports were submitted to the Health and Care Manager at ZRCS and a copy to MoH through incident commanders. The Health and Care Manager then analysed the reports and gave feedback to volunteers and shared insights with MoH and other stakeholders. Further, a team from ZRCS conducted weekly monitoring visits to operation areas to get feedback from the community as well as assessing effectiveness of the operation. Nine (9) out of 12 planned monitoring visits were conducted only, due to limited number of NS staff assigned to this operation and time constraint.

The introduction of mobile data collection using Kobo toolbox by the RDRT delegate phased away paper-based household monitoring surveys and embraced electronic reporting. ZRCS did not procure smart phones for the undertaking but volunteers who had, used their own. Data collected through door to door hygiene promotion by end of March 2018 indicates the following:

- 92,294 households were reached with hygiene and cholera prevention and control messages.
- 242,000 people were reached with cholera prevention and control messages.
- 66% of households reached appropriately disposing solid waste- proper household rubbish collection
- 74% of households reached had access to clean and safe water (boiling or use chlorine).
- 74% of households reached had access to drinking water from safe sources (Tap, borehole).
- 68% of households reached practiced appropriate hand washing at all critical times.

Lessons Learnt Workshop
At the end of the operation, ZRCS convened a lesson learnt workshop involving several other actors held on 11th April 2018 at Southern Sun Hotel in Lusaka. The workshop was graced by the MoH Permanent Secretary through the Director of Public Health. The purpose of this workshop was to review ZRCS involvement in the 2017/2018 cholera response operation by reviewing what worked and what did not work well, analyse why and propose recommendations to improve future operations. Several other actors such as Save the Children, Disaster Management and Mitigation Unit (DMMU), Zambia National Public Health Institute ZNPHI as well as MoH represented at, district, province and national levels, took part in this workshop. ZRCS was represented by NHQ staff, NLRC delegate and Lusaka RC branch officials. IFRC was represented by the Regional Disaster Management Delegate. The workshop was done in

two phases; the first part involving ZRCS and stakeholders who reviewed general operation and the second part only involved ZRCS reviewing internal operations and systems.
The following key points were captured during the lessons learnt workshop;

- Rushed recruitment of volunteers' compromised quality of service. Therefore, there is a need for ZRCS to solicit funds for continuous recruitment and training of volunteers in pre-outbreak phase in hotspots including Lusaka.
- Use of smartphones for data collection and reporting maximize on time as information is received in real time and reduce paper work (environment friendly). The NS will include the use of smartphones and Kobo in its programs and for similar operations.
- Coordination with key stakeholders at all levels is vital for multisector approach on response to the outbreak. For future operations, ZRCS will ensure that clear memorandum of understanding for partnerships and funding are signed to ensure harmonization and smooth operations.
- Baseline survey and post outbreak evaluation is necessary to measure progress hygiene transformation and impact of hygiene promotion.

Challenges

- DREF transfer of funds took long to be released and therefore delayed the beginning of activities implementation.
- Inadequate staffing posed a challenge on monitoring of the operations. The Health and Care department at ZRCS headquarters in Lusaka, under which this operation was coordinated and managed, was understaffed. The department had the Health and Care Manager as the only direct staff involved with some support from the Director of Programmes and the Disaster Management Coordinator. Further, the limited NS staff tasked to support the cholera operation were simultaneously supporting the ongoing refugee operation and other long-term projects which to some extent, affected the implementation of activities.

Lessons Learned

- Better anticipation and coordination with IFRC to ensure DREF EPoA is ready on time.
- Review the staffing allocation during emergency response vs. long term programming.

D. THE BUDGET

The overall budget for this DREF operation was CHF 248,705 of which CHF 209,000 (84.04%) was spent. A balance of CHF 39,705 will be returned to the DREF.

Explanation of variances in financial report

- No budget was allocated on the "Clothing and textile" budget line, but CHF 5005 expenses booked on this line. This is because PPE, budgeted under "Medical & FA" budget line was erroneously coded as clothing and textile.
- "Information & Public Relations" was over spent by CHF 839 (83.9%) as branded bibs were budgeted under "Medical & FA" budget line but erroneously coded as Information & Public Relations.
- "Office Costs" were over spent by CHF 261 (72.5%) as stationery and printing costs were underbudgeted.
- Communications was underspent by CHF 1,403 (6.46%) as some of wireless Internet costs were erroneously coded under office costs and other Internet invoices were received by the National Society after the DREF eligibility period.

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How we work

All IFRC assistance seeks to adhere to the **Code of Conduct** for the International Red Cross and Red Crescent Movement and Non-Governmental Organizations (NGO's) in Disaster Relief and the **Humanitarian Charter and Minimum Standards in Humanitarian Response (Sphere**) in delivering assistance to the most vulnerable. The IFRC's vision is to inspire**, encourage, facilitate and promote at all times all forms of humanitarian activities** by National Societies, with a view to **preventing and alleviating human suffering**, and thereby contributing to the maintenance and promotion of human dignity and peace in the world.

The IFRC's work is guided by Strategy 2020 which puts forward three strategic aims:

1. Save lives, protect livelihoods, and strengthen recovery from disaster and crises.
2. Enable healthy and safe living.
3. Promote social inclusion and a culture of non-violence and peace

Disaster Response Financial Report

MDRZM011 - Zambia - Cholera Outbreak

Timeframe: 15 Dec 17 to 18 Apr 18

Appeal Launch Date: 15 Dec 17

Final Report

Selected Parameters			
Reporting Timeframe	2017/12-2018/7	Programme	MDRZM011
Budget Timeframe	2017/12-2018/4	Budget	APPROVED
Split by funding source	Y	Project	*
Subsector:	*		

All figures are in Swiss Francs (CHF)

I. Funding

	Raise humanitarian standards	Grow RC/RC services for vulnerable people	Strengthen RC/ RC contribution to development	Heighten influence and support for RC/RC work	Joint working and accountability	TOTAL	Deferred Income
A. Budget		**248,705**				**248,705**	
B. Opening Balance							
Income							
Other Income							
DREF Allocations		*248,705*				*248,705*	
C4. Other Income		***248,705***				***248,705***	
C. Total Income = SUM(C1..C4)		**248,705**				**248,705**	
D. Total Funding = B +C		**248,705**				**248,705**	

* Funding source data based on information provided by the donor

II. Movement of Funds

	Raise humanitarian standards	Grow RC/RC services for vulnerable people	Strengthen RC/ RC contribution to development	Heighten influence and support for RC/RC work	Joint working and accountability	TOTAL	Deferred Income
B. Opening Balance							
C. Income		248,705				**248,705**	
E. Expenditure		-209,000				**-209,000**	
F. Closing Balance = (B + C + E)		39,705				**39,705**	

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Split by funding source	Y	Project	*
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III. Expenditure

Account Groups	Budget	Expenditure					Variance
		Raise humanitarian standards	Grow RC/RC services for vulnerable people	Strengthen RC/ RC contribution to development	Heighten influence and support for RC/ RC work	Joint working and accountability	TOTAL	
	A						B	A - B
BUDGET (C)			**248,705**				**248,705**	
Relief items, Construction, Supplies								
Clothing & Textiles			5,005				**5,005**	**-5,005**
Water, Sanitation & Hygiene	69,600		64,738				**64,738**	**4,862**
Medical & First Aid	6,136		801				**801**	**5,335**
Total Relief items, Construction, Sup	75,736		70,544				**70,544**	**5,191**
Logistics, Transport & Storage								
Transport & Vehicles Costs	5,450		4,575				**4,575**	**875**
Total Logistics, Transport & Storage	5,450		4,575				**4,575**	**875**
Personnel								
National Society Staff	10,775		2,199				**2,199**	**8,576**
Volunteers	121,725		105,449				**105,449**	**16,276**
Total Personnel	132,500		107,648				**107,648**	**24,852**
Workshops & Training								
Workshops & Training	8,100		2,845				**2,845**	**5,255**
Total Workshops & Training	8,100		2,845				**2,845**	**5,255**
General Expenditure								
Travel	8,000		7,859				**7,859**	**141**
Information & Public Relations	1,000		1,839				**1,839**	**-839**
Office Costs	360		621				**621**	**-261**
Communications	1,500		107				**107**	**1,393**
Financial Charges	880		206				**206**	**674**
Total General Expenditure	11,740		10,632				**10,632**	**1,108**
Indirect Costs								
Programme & Services Support Recove	15,179		12,756				**12,756**	**2,423**
Total Indirect Costs	15,179		12,756				**12,756**	**2,423**
TOTAL EXPENDITURE (D)	**248,705**		**209,000**				**209,000**	**39,705**
VARIANCE (C - D)			**39,705**				**39,705**	

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Selected Parameters			
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Budget Timeframe	2017/12-2018/4	Budget	APPROVED
Split by funding source	Y	Project	*
Subsector:	*		

All figures are in Swiss Francs (CHF)

IV. Breakdown by subsector

Business Line / Sub-sector	Budget	Opening Balance	Income	Funding	Expenditure	Closing Balance	Deferred Income
BL2 - Grow RC/RC services for vulnerable people							
Disaster management	248,705		248,705	248,705	209,000	39,705	
Subtotal BL2	248,705		248,705	248,705	209,000	39,705	
GRAND TOTAL	**248,705**		**248,705**	**248,705**	**209,000**	**39,705**	