DREF operation final report

International Federation of Red Cross and Red Crescent Societies

Comoros: Cholera

DREF Operation no. MDRKM001
28 March, 2008

The International Federation's Disaster Relief Emergency Fund (DREF) is a source of un-earmarked money created by the Federation in 1985 to ensure that immediate financial support is available for Red Cross Red Crescent response to emergencies. The DREF is a vital part of the International Federation's disaster response system and increases the ability of national societies to respond to disasters.

Summary: 139,000 CHF was allocated from the Federation's Disaster Relief Emergency Fund (DREF) on 7 September, 2007 to respond to the needs and control the spread of the cholera epidemic in 2007. The response programme was conducted by the Comoros Red Crescent Society with technical support from the French Red Cross.

The Comoros Red Crescent conducted its intervention in the affected regions through its motivated and committed 140-strong volunteer base. At least 30 volunteers were deployed on a daily basis; 20 to support cholera treatment centre activities, 7 to carry out disinfection and 6 to conduct sensitization.

In addition to support from the International Federation, the French Red Cross and the French Embassy in Comoros provided funding to support Comoros Red Crescent operational needs and coordination.

Comoros Red Crescent volunteers during disinfection at the Cholera Treatment Centre

This response programme contributed to the reduction in the number of new infection and mortality rates resulting from the cholera epidemic together with activities conducted by paramedical teams attached to the five cholera treatment centres, and volunteers who focused on disinfection and sensitization.

With more than 150,000 people reached, the operation was implemented in 3 months and was closed by end of November, 2007.

<click here for the final financial report, or here to view contact details>

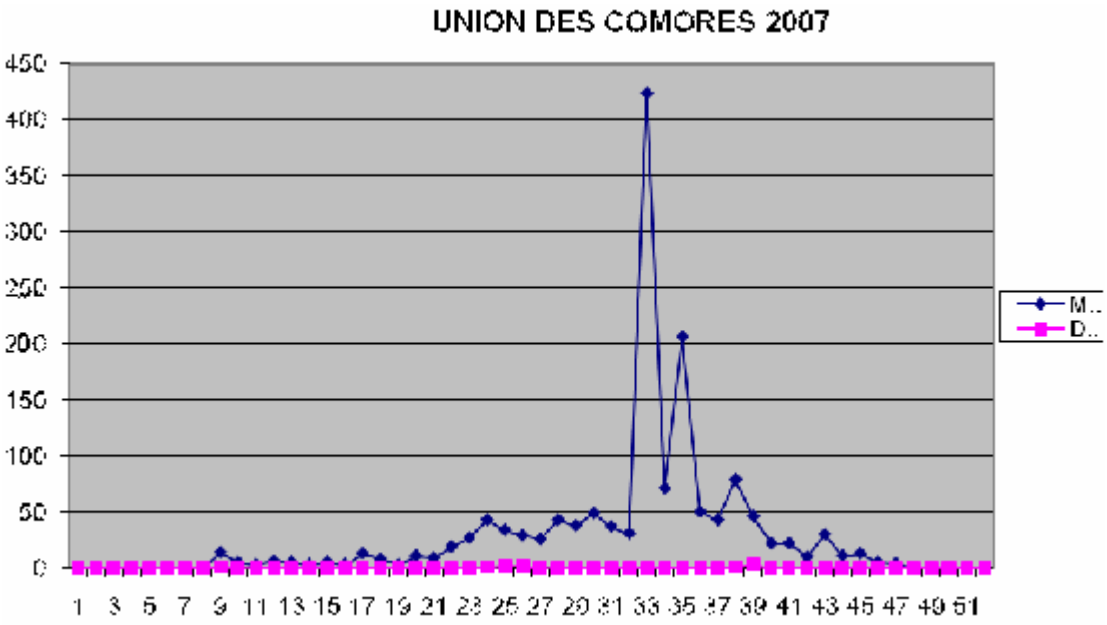
The situation

The cholera epidemic had started to spread around the Comoros islands on 25 February, 2007. However, it was in August, 2007 that the rates of infection peaked sharply with a caseload of 1,480 as at 13 November. By the end of the month, 1,554 had been affected and 29 deaths reported on the islands of Grande Comore (Ngazidja) and Moheli both islands having a total population of 395,312.

The epidemiological curve illustrated below shows a sudden increase in suspected cases between weeks 31 and 35, during the first weekend of the month of August, signaled by a sudden increase in people seeking treatment and referrals. Factors contributing to this rapid increase in infection rates included lack of basic hygiene measures, poor supply of clean water and the epidemic having an increased impact as the annual festival of grand marriages and Ramadan (July and August) began. The most affected districts included Moroni, Mitsamiouli and Foumbouni. Anjouan Island, located towards the east of Moheli was not affected during the whole period.

With the passing of the peak of infections following week 33 (corresponding to the first week of August), the number of infections started to decline and the situation was in control by the close of the operation with an approximate cumulative one dozen cases per week.

Figure 1: Rates of Infection Starting in January, 2007 (Source: CRC)



Red Cross and Red Crescent action

The Comoros Red Crescent, acting as an auxiliary of public health authorities, and following a request from health authorities, mobilized its resources to intervene and bring the spread of the epidemic to control. Relying on previous experience in handling health related disasters the CRC was able to effectively manage the situation. The CRC was able to double its efforts during the most critical period and solicited support from the French Red cross in management of the epidemic. Through its PIROI facility, the French Red Cross outlined a plan of action and start-up field activities using CRC volunteers already deployed.

Three cholera treatment centres (CTC) were set up in Grande Comore (El Maarouf in Moroni, Mitsamiouli in the north as well as Foumbouni in the south), and others in Moheli (Niaumachioi and Fomboni). They were equipped with maintenance, hygiene promotion, sanitation and medical instruments. The water supply for the CTC located in El Maarouf became a priority at the critical periods of the epidemic. Responding to this need, the PIROI-supplied water kit already deployed in Moroni was directed to El Maarouf. A CRC volunteer was deployed to each CTC to assist during critical cases and ensure that the premises were disinfected. As a result, urgent cases that came up during the CTC management period were promptly addressed.

Sensitization sessions were thoroughly conducted to create awareness among the affected populations on the cholera epidemic. Up to 10 CRC volunteers from Moroni were deployed to move across the islands in close collaboration with the local Red Cross teams to disseminate prevention messages by promoting basic hygiene measures like washing hands before eating, how to prepare chlorine solutions sufficiently. They also put up posters with preventive messages in public places.

The Comoros Red Crescent volunteers were deployed in Moheli in November, 2007 to assess the appropriateness of patient receiving facilities to the hygiene standards acceptable to the local authorities. Three cholera cases had been identified in the region at the beginning of November.

In Anjouan, no cholera cases were reported throughout the reporting period. However, in view of political instabilities in the island, a stock of disaster preparedness materials was pre-positioned at the level of the pharmaceutical association of the Comoros Island (PNAC)[1] by the national committee for Cholera control in standby in case the need for assistance arose. The Comoros Red Crescent assisted in transportation of the materials and follow ups were conducted by a regional committee engaged in the cholera response.

Coordination

The National Committee for Cholera Control[2] (CNCL) brought together all the actors engaged in the cholera intervention, including the Comoros Red Crescent and the French Red Cross. The National Autonomous Pharmaceutical Association of the Comoros Islands provided medical set-ups such as Ringer Lactate and oral re-hydration salts, and supported logistics coordination.

The UN Children's Fund (UNICEF) provided funding for procurement of chlorine, production of posters for sensitization and also provided a vehicle for use by field-deployed volunteer teams during community sensitization. A poster display campaign financed by UNICEF had 14,000 posters produced in Arabic, French and local languages (*Shi-komori*). These were displayed in public places, market areas, hotels and restaurants by the Comoros Red Crescent volunteers and members of the CNLC.

The World Health Organization (WHO) also provided funds to carry out minor projects including support to public sensitization through a medical specialist visiting the affected regions, broadcasting messages through the mass media during the Ramadan period, as well as providing a vehicle on standby that could be relied on for rapid response and disinfection activities. A technical display, targeting heads of educational institutions was created to show how to prepare chlorine solutions, sensitization on washing hands for children who are in school.

Progress towards objectives

The Comoros Red Crescent conducted its intervention in the affected regions through its motivated and committed volunteer base made up of 140 volunteers. At least 30 volunteers were deployed on a daily basis; 20 to support cholera treatment centre activities, 7 to carry out disinfection and 6 to conduct sensitization. As a result, the National Society was able to reach its target of 150,000 people (147,600 as at 13 November, 2007) located within the islands of Grande Comore, Moheli and Anjouan with preventive messages directly or through the mass media and promote hygiene and sanitation through disinfection.

Goal: To contribute towards the reduction of Cholera outbreak in Comoros, targeting 150,000 people.

Water, sanitation, and hygiene promotion

Objective 1: To effectively manage operations of the Cholera treatment camps in Moroni and Mitsamiouli.

Achievements

In Grande Comore (Ngazidja), 100 Comoros Red Crescent volunteers were trained in cholera transmission patterns, on procedures involved when conducting chlorination and disinfection and how to disseminate effective messages on cholera prevention to the targeted communities. Some 200 volunteers who had been trained during previous sessions were also introduced to new methods of addressing the epidemic.

In total 1,448 patients were assisted in all the treatment centres set up in 5 different locations, as shown in the table below. Most of the Cholera Treatment Centres (CTC) handled patient care by enhancing preventive measures including hygiene practice, sanitation, disinfection of surrounding areas and people. 90 volunteers were mobilized to conduct these activities.

Table 1: Patients Admitted into 5 Cholera Treatment Centres (CTCs)

Islands	**Grande Comore**			**Moheli**		**Total**
CTC	**El Maarouf**	**Fombouni**	**Mitsamiouli**	**Fomboni**	**Nioumachioi**	
Patients	894	134	376	19	25	**1,448**

[1] In French : Pharmacies Nationales Autonomes des Comors (PNAC)

[2] In French: Comité National de Lutte Contre le Choléra (CNLC). This is a decision-making body set up by the Comorian Government to address the needs arising from the epidemic.

The CTCs in Moroni (El Maarouf) and Mitsamiouli were supported and equipped with materials to enable them to respond to the needs of the populations and attain the acceptable standards of sanitation. The Red Crescent volunteers were in charge of hygiene matters, sanitation and assistance to patients seeking treatment. They were able to adopt a rotation system on 24 hour basis and supervised by the head of CTC. To strengthen record keeping and tracking of the infection pattern, every patient coming into the CTC was interviewed on the history of their infection and the symptoms.

The interventions of the Comoros Red Crescent extended to Fomboni, on the island of Moheli where an assessment undertaken by the National Society indicated several dysfunctional facilities, poor sanitary conditions and lack of control to the spread of the epidemic, raising fears of an increase in rates of infection.

In response to the needs identified, the Comoros Red Crescent organized a second visit to the island to conduct response activities including training of 20 nurses, training of 25 volunteers to offer sustained support, support to medical centres including construction of tents, construction of latrines and provision of light beds and medical aid materials. Other activities included coordination of activities by the Comoros Red Crescent regional committees, sensitization of communities and disinfection.

Impact:
The CTCs have reported no deaths as from the time that they were set up in early October, 2007 followed by volunteer and staff recruitment, training and deployment. The roles and responsibilities of the volunteers and medical personnel had been clearly spelt out to enhance effective case management. Due to close working style among volunteers and health specialists, hygiene and sanitation activities were carried out as well as patient care. This ensured that the case examination centres remained contamination-free. As a result, the Cholera treatment camps offered effective and timely assistance to new Cholera cases.

Objective 2: To promote individual and environmental hygiene in order to break the transmission chain of the epidemic.

Achievements
A team in charge of disinfection visited 621 homes to complete the disinfection activities for domestic areas, furniture, latrines (339 disinfected) as well as areas of assembly to stop the chain of transmission and to limit contamination passing through people who had been in contact with cholera patients. The volunteers also distributed disinfection products as a way to minimize infection through digestive process.

A team made up of 10 volunteers moved into the villages in Grande Comore (Ngazidja) where cases of infections had been reported, to conduct thorough disinfection and to minimize chances of new infections. More emphasis was put on disinfection coupled with education on proper chlorination as well as directly sensitizing the affected communities within their homes to the benefits of washing hands and boiling water and proper methods of food preparation in order to minimize the chances of infection.

Impact
The local CRC committee in M'beni put in place a cholera management policy with support from the local medical authorities and the national committee of the CRC. This enabled a team of volunteers to be deployed to affected communities directly without waiting for authorization from Moroni and Mitsamiouli districts. This enabled quick prevention measures and case detection to be activated thus minimizing the risks of further infection.

Challenges
CRC volunteer teams conducting assessments and case identification within the affected villages of M'beni and Bangoua Kouni encountered communities' lack of willingness to reveal confirmed cases. Since the epidemic thrives in environments that lack proper sanitation, some affected communities were embarrassed to reveal the spread of the epidemic within their localities as well as welcome any intervention options provided by the National Society as it implied that they were unclean. Access to some households with suspected cases in the northern region of Grande Comore Island became difficult.

Following CRC analysis of the circumstances, it was found that the reluctance to share information was because the epidemic was misunderstood and suspected cases were responded to through stigmatization. Support from the local authorities was requested to seek avenues to reach the most vulnerable.

To address this challenge, the National Society volunteers set aside special days to focus prevention activities on areas whose communities were uncomfortable with the infection. Whole days named *ville propre* translated as 'all out to town' were spent conducting disinfection and sensitization in these localities. After

one month of almost daily intervention by the local volunteers and with support from the CNLC 'sensitization support in affected regions' programme, the epidemic was brought under control.

Objective 3: To sensitize 150,000 people to the signs and symptoms of Cholera and encourage communities to refer cases to the nearest health centres.

Achievements
A total of 86 sensitization campaigns were held by the Comoros Red Crescent from 15 August. Out of these, 20 campaigns were conducted in villages located in Grande Comore Island whereby some were visited more than once. The activities were able to mobilize more than a dozen volunteers who formed teams of two or three to visit the villages affected by the epidemic. The messages delivered to the communities addressed issues of personal hygiene, food, potable water, cisterns and ways of handling suspected cholera cases.

Initially, the sensitizations were directed at the volunteers from the local committees who were mobilized to reach out to the affected communities with the useful information. Some 10,000 information, education and communication materials were distributed by the CRC, in addition to 14,000 that had been produced by UNICEF and put up in strategic locations of urban areas for people to read. In addition, the CRC elaborated and distributed 6,000 flyers in Shi-Komori language on basic proper hygiene measures. These were distributed directly to the affected communities.

During the second round, the volunteer team took part in sensitization sessions conducted by CNLC and health specialists. With proper coordination among themselves, the volunteers from the National Society were able to establish effective visiting plans, getting in touch with the local authorities, religious offices and management of transportation. As a result, the affected populations were informed about the effects of the cholera epidemic and how to take measures for prevention and control.

The mass media was used periodically to spread awareness messages during talk shows and special reports. The CRC was able to air some radio programmes on cholera prevention on the eve of the Islamic feast. A play produced and choreographed by the CRC was also recorded and shown on the national television. Since the radio is widely relied upon for news updates and educational programmes and entertainment In Comoros, the CRC was also able to tap into the resource through its media contacts to air programmes that promoted hygiene promotion and case identification. Seeking to address the issue of stigmatization of cholera patients, a press conference was held involving the National Society and CNLC to give a firm message on the need to support the affected communities.

Impact
Since Comoros is a strongly religious country, working closely with local area health and religious authorities was used to give fresh impetus to the National Society's intervention approach. As a result, the National Society was seen as a credible health intervention actor. This cooperative environment contributed to the control of the spread of the epidemic since the affected communities were able to respect sensitization teams and learn from the awareness sessions.

National Society Capacity Development
The CRC made plans to stock the non-perishable materials procured and utilized in the Cholera Treatment centres inside a small warehouse at the national committee for the CRC under the national health coordinator's care until such a time when these shall not be required. The stocks will later be relocated to the CRC/PIROI warehouse to consolidate into a cholera kit pre-positioned to be used during future deployments.

Conclusion

Lessons learned:

- The Comoros Red Crescent was able to realize its objectives under the plan of action indicated by a reduction in the mortality rates. This proposed plan was supported through intervention from local authorities and medical and paramedical personnel stationed within the CTCs. The response by the Red Crescent volunteers strengthened the overall response. As a result of the sustained mobilization of the volunteers and the capacity of the CRC to work closely with other actors like local authorities and the media, the number of new cases was dramatically reduced.
- The intervention teams conducting health education moved from place to place using road transport (hired off-road vehicles). This enabled the CRC to reach a cover a wider geographic area and thus reach more people. A vehicle provided by the WHO also facilitated transportation but due to other pressing needs, it was sometimes unavailable for use by the Comoros Red Crescent teams.

- The National Government through its Ministries was constantly needed to support the rapid response and control of the epidemic, using for example, ministerial pronouncements regarding public feasts and contacting district medical heads for role distribution and compensation of medical personnel and paramedical staff.

- However, due to overall weak sanitation and hygiene standards across the Comoros islands, the threat of the situation getting endemic still weighs heavily and a long-term action would be required to sustain the education on health and promotion of hygiene using strategies that promote sustainability and encourage participation. In attempts to put this to practice, the CRC and the French Red Cross have come up with plans under the programme titled '*improvement of hygiene and access to potable water within primary schools in the Comoros Union, with a link to community sensitization*'.

A study of the impact of the sensitization activities as well as an evaluation mission by PIROI[3] medical specialist and the Watsan coordinator was expected to be conducted by February, 2008. The evaluation, aimed at tracing the lessons learned following the cholera epidemic, to formulate an intervention strategy by the Comoros Red Crescent ahead of future epidemics and to build up on the tools and the means deployed. This evaluation is necessary as an interface for preparedness for future interventions, considering the weak sanitation of the country and its populations.

How we work

All International Federation 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 is committed to the Humanitarian Charter and Minimum Standards in Disaster Response (Sphere) in delivering assistance to the most vulnerable.

The International Federation's activities are aligned with its Global Agenda, which sets out four broad goals to meet the Federation's mission to "improve the lives of vulnerable people by mobilizing the power of humanity".

Global Agenda Goals:

- Reduce the numbers of deaths, injuries and impact from disasters.
- Reduce the number of deaths, illnesses and impact from diseases and public health emergencies.
- Increase local community, civil society and Red Cross Red Crescent capacity to address the most urgent situations of vulnerability.
- Reduce intolerance, discrimination and social exclusion and promote respect for diversity and human dignity.

Contact information

For further information specifically related to this operation please contact:

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[3] In French: Plateforme d'Intervention Régionale pour l'Océan Indien (PIROI)

International Federation of Red Cross and Red Crescent Societies

MDRKM001 - Comores - Cholera Epidemic

Final Financial Report

Selected Parameters	
Reporting Timeframe	2006/1-2008/3
Budget Timeframe	2006/1-2008/2
Appeal	MDRKM001
Budget	APPEAL

All figures are in Swiss Francs (CHF)

I. Consolidated Response to Appeal

	Health & Care	Disaster Management	Humanitarian Values	Organisational Development	Coordination & Implementation	TOTAL
A. Budget		148,663				148,663
B. Opening Balance		0				0
Income						
Other Income						
DREF Allocations		*139,000*				*139,000*
C5. Other Income		*139,000*				*139,000*
C. Total Income = SUM(C1..C5)		139,000				139,000
D. Total Funding = B +C		139,000				139,000
Appeal Coverage		94%				94%

II. Balance of Funds

	Health & Care	Disaster Management	Humanitarian Values	Organisational Development	Coordination & Implementation	TOTAL
B. Opening Balance		0				0
C. Income		139,000				139,000
E. Expenditure		-138,999				-138,999
F. Closing Balance = (B + C + E)		1				1

III. Budget Analysis / Breakdown of Expenditure

Account Groups	Budget	Expenditure						Variance
		Health & Care	Disaster Management	Humanitarian Values	Organisational Development	Coordination & Implementation	TOTAL	
	A						B	A - B
BUDGET (C)			148,663				148,663	
Supplies								
Shelter - Relief			11,664				11,664	-11,664
Water & Sanitation			21,668				21,668	-21,668
Medical & First Aid	16,350							16,350
Total Supplies	16,350		33,332				33,332	-16,982
Transport & Storage								
Transport & Vehicle Costs	8,175		18,157				18,157	-9,982
Total Transport & Storage	8,175		18,157				18,157	-9,982
Personnel								
National Staff			-277				-277	277
National Society Staff	24,525		42,471				42,471	-17,946
Total Personnel	24,525		42,194				42,194	-17,669
Workshops & Training								
Workshops & Training	80,125		6,801				6,801	73,324
Total Workshops & Training	80,125		6,801				6,801	73,324
General Expenditure								
Travel	9,825		10,380				10,380	-555
Information & Public Relation			3,029				3,029	-3,029
Office Costs			9,483				9,483	-9,483
Communications			6,531				6,531	-6,531
Financial Charges			58				58	-58
Total General Expenditure	9,825		29,481				29,481	-19,656
Programme Support								
Program Support	9,663		9,035				9,035	628
Total Programme Support	9,663		9,035				9,035	628
TOTAL EXPENDITURE (D)	148,663		138,999				138,999	9,664
VARIANCE (C - D)			9,645				9,645	