

DREF operation



International Federation
of Red Cross and Red Crescent Societies

Cook Islands: Dengue outbreak

DREF operation n° MDRCK001
Final Report
GLIDE n° **EP-2009-000103-COK**
11 January 2010

The International Federation's Disaster Relief Emergency Fund (DREF) is a source of un-earmarked money created by the International Federation in 1985 to ensure that immediate financial support is available for Red Cross and 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.

The period covered in this report: 3 August – 21 December 2009

CHF 50,000 (USD 44,929 or EUR 33,053) has been allocated from the International Federation's Disaster Relief Emergency Fund (DREF) to support the Cook Islands Red Cross Society (CIRCS) in delivering immediate assistance to approximately 8,000 beneficiaries through direct services and information, education and communication materials. Un-earmarked funds to repay DREF are encouraged.

Summary:

The Cook Islands was experiencing a serious dengue outbreak, with up to 994 cases reported on the main island of Rarotonga as of 20 May 2009. That number had reached 1,214 by 18 June 2009. A national plan was formulated by members of the national disaster management council and the Cook Islands Red Cross Society (CIRCS) presented the activities that will be implemented by their staff, volunteers and community partners.

The Cook Islands Red Cross Society, in coordination with government and non-government agencies in-country, responded to the threat with an increase in awareness-raising in identified communities as well as through the national society's current community-based health and first aid (CBHFA) programme. The International Federation released CHF 50,000 from the disaster relief emergency fund on the 28 May 2009 to support the national society in responding to the outbreak. With these funds, the national society procured and distributed vector control kits to affected communities as well as disseminated information, education and communication materials to the public.

The operation was implemented over four months, its completion at the end of September 2009. This final report details all activities carried out in this operation. A balance of CHF 4,282 was returned to DREF.

The International Federation, on behalf of the Cook Islands Red Cross Society would like to thank all donors and partners for their generous support to DREF.

The European Commission's Office for Humanitarian Aid (ECHO) contributed EUR 26,442 to the DREF in replenishment of the allocation made for this operation. The major donors to the DREF are the Irish, Italian, Netherlands and Norwegian governments and ECHO.

Details of all donors can be found at this link:

<http://www.ifrc.org/what/disasters/responding/drs/tools/dref/donors.asp>. (You can also click [HERE](#) to be redirected).

[<click here to view contact details; or click here to view the final financial report>](#)

The situation

The Cook Islands was experiencing a serious dengue outbreak in the southern group of islands. With a country population of approximately 13,000¹ and a total of 936 cases were reported as of 14 May 2009 to the health department, with 57 patients admitted to hospital. Cook Islands Red Cross Society's involvement in the recent dengue outbreak operation is in response to the request for assistance and support from the governments' health department as resources were depleting rapidly. Lack of resources meant more Cook Islanders were vulnerable to this outbreak; hence, the request for assistance from the International Federation's DREF.

District/Island	Number of Reported cases	
Rarotonga:		Aitutaki (1972) and Mauke (373)
<i>Puaikura</i>	368	with smaller populations are the
<i>Teautonga</i>	573	other two islands who also have
<i>Takitumu</i>	265	the <i>aedes aegypti</i> mosquito and
Mauke	16	people were affected by dengue
Aitutaki	25	fever and are still vulnerable to the
Total	1247	disease.

The table below indicates information on the affected districts

on the main island of Rarotonga and the total number of cases for Mauke and Aitutaki from 19 March until 18 June 2009.

The immediate concern was that there may have been a number of cases not reported to the health department. The situation was further exacerbated by the threat of A (H1N1) flu in the region, with New Zealand reporting confirmed cases of A (H1N1).

As of 18 June the ministry of health has not reported any more cases of dengue fever. However, Cook Islands Red Cross Society (CIRCS) has continued with its pro-active efforts to eradicate mosquito breeding grounds and to further enhance its awareness and educational programs. CIRCS also takes into consideration discoveries by climate change experts that the increase in temperatures and rainfall may bring about an increase in tropical diseases such as dengue fever, malaria and so on.

Coordination and partnerships

CIRCS is a member of the national disaster risk management council (NDRMC) and has been working closely with the government especially the ministry of health and other agencies in-country in responding to the threat. A task force put in place, with agencies that have put together a response plan involving the government, the private sector and communities. In addition to this, CIRCS has been working in collaboration with the leaders of the three districts on Rarotonga.

In Aitutaki, the Red Cross branch organized the Youth Peer Educator (YPE) volunteers to assemble the vector control kits including the distribution and dissemination of information. In addition, the Island Council and Island Administration had requested for assistance and were all working in collaboration with the CIRCS national office here in Rarotonga.

¹ Cook Islands Statistics Office, <http://www.stats.gov.ck/index.htm>

In Mauke, the president of the branch took charge and engaged volunteers to distribute the vector control packs and the dissemination of information on dengue. This also included mobilizing the wider public through their involvement in the response to the dengue outbreak.

The educational and awareness of dengue activities were also promoted in all first aid training courses in both adult and PeopleSaver trainings including the YPE teams. The YPE and the national society volunteers were also engaged in the assembling of the vector control kits.

Red Cross and Red Crescent action

CIRCS integrated the dissemination of preventative information prepared by the ministry of health into its existing community-based activities. Further to the council meeting, CIRCS has decided to upscale its health promotion activities which will include CIRCS staff and volunteers making door-to-door visits to meet and disseminate information on preventive efforts during the distribution of the vector control packs.

The needs

Beneficiaries were identified according to the mapping assessment that was carried out by the ministry of health and had been translated into the geographic information system that was presented at the national meeting on 18 May 2009. The communities in the densely affected areas of Rarotonga were a priority and the remaining areas were all covered eventually with the view to eliminate the problem. Please refer to previous table for the specific numbers affected in each district including Aitutaki and Mauke.

The ministry of health had identified those affected to be between 10 and 40 years of age. Immediate needs identified by the national disaster risk management council include heavy machinery, fuel, spray chemicals, over-time hours for workers to address the threat. CIRCS has also engaged in assisting in these areas as stated in the proposed operation section.

CIRCS also increased purchase of various vector control items for family kits. More mosquito nets were air freighted to Aitutaki as there is an increasing problem with mosquitoes. A demand for pesticides also came from Aitutaki. Transportation for staff and volunteers for distribution and dissemination activities were also required as well as further production of information, education and communication (IEC) materials in both Maori and English languages.

The proposed operation

In the original proposal two main objectives were developed to guide the entire dengue operation and funds received from DREF were allocated. They were;

Distributions (basic non-food items)

Objective 1: Up to 100 community vectors control kits² are distributed to support up to 1,800 people in Rarotonga, Aitutaki and Mauke islands.

Activities planned:

1. Procurement of items for the kits – these were all bought locally from the various local supermarkets and stores.
2. Identification and selection of the beneficiaries and communities. Beneficiaries were those on the list of reported cases released daily by the public health starting with the most affected areas.

² Consists of a 30-litre fumigator, 20 litres of chemical insecticide, overalls, a pair of work boots, a pair of work gloves, a fumigating cap, a respiratory mask and a pair of safety goggles.

3. Development of beneficiary targeting strategy and registration system to deliver intended assistance. A form was developed; whereby, distributors would enter the names of beneficiaries including the number of people and their ages in each of the households. Beneficiaries or an adult member of the household also signs the form upon receipt.
4. Preparation of the kits and distribute relief supplies and control supply movements from point of dispatch to end user. On Rarotonga, CIRCS staff and volunteers assembled and distributed the kits. Stock was stored and despatched from the relief supply container.
5. Support to the national plan with fuel for cleaning of high risk areas. Initially, main focus was on the distribution of the vector control kits. However, fuel for cleaning some of the various identified high risk or vulnerable areas was given later.
6. Distribution of the kits with appropriate monitoring and evaluation on the relief activities and provide reporting on relief distributions. As mentioned in the interim report, a few of the beneficiaries were appreciative of the vector control kits and could afford their own. They preferred that less fortunate homes received the kits. Others suggested that the kits should be given before a person gets dengue.
7. Develop an exit strategy. An emergency stock has been purchased for future outbreaks. However, CIRCS expects dengue fever to be under control since its' proactive approach in dealing with the situation as mentioned later on in this report.

The first action taken by CIRCS was to accompany the ministry of health staff on their environmental inspection of the houses where the positive cases were identified. Initially a tutaka (public health environment inspection) was carried out on all three islands. Communities were encouraged to clean around their homes while getting rid of mosquito breeding grounds such as empty cans, coconut shells, and water storage areas; and ensuring that these are covered properly. Infected people were also advised to stay indoors to avoid the spread of the disease.

Vector control items were purchased and assembled into individual packs.

By the second week of June the number of reported cases decreased. It was decided that the planned activities needed to be broadened to eradicate mosquito breeding grounds on a larger scale other than just around the homes. This objective was revised as follows:

Revised Objective 1: Up to 5,000 people will benefit from the community cleanup of high risk areas in Rarotonga, Aitutaki and Mauke islands.

As most dengue cases were in Rarotonga, clean up campaigns were planned according to risk areas identified by the national task force team endorsed by the cabinet. On Rarotonga there are three main districts; Takitumu, Puaikura and TeAuOTonga. The Puaikura districts have had on going problems of mosquitoes and flies. The vulnerability of people in this community to vector borne diseases is also high as the islands' rubbish dump is located in one of its' four villages, Ruaau. Several proposals to the national budget for assistance had not eventuated therefore the district leaders requested CIRCS for financial assistance of USD15,000. A proposal of the mosquito eradication activities and costs was presented. The communities of this district were able to start work immediately eliminating breeding grounds in stagnant streams and overgrown bushes mainly over streams and vacant properties. Unfortunately, international, national and regional events took place consecutively from July till the end of September here in Rarotonga and Puaikura was not able to implement most of their activities. Another emergency arose on the island of Aitutaki therefore it was deemed necessary to divert a small amount of the allocated funds.

Like Puaikura, TeAuOTonga communities were heavily involved in preparations for the three events on Rarotonga. TeAuOTonga district leaders did not see an immediate need for the funds; therefore, their monetary was also diverted to Aitutaki to meet the requested amount

A separate monetary amount was allocated to the Takitumu district. Within this district are three villages. Only two of the three districts required financial assistance. Ngatangia and Matavera

both shared a small sum of money. Matavera preferred to purchase three grass cutters to clear stagnant and non-flowing streams. Most importantly the tools will ensure continuity of the cleanup programs once the DREF funds ends. The tools are stored by CIRCS for Matavera as this ensures that the tools are available for a longer period. A monthly cleanup programme is also provided by the Matavera community leader and they will collect the equipment from the national office to use and return for the next clean up time.

The Ngatangia village decided to purchase one grass cutter to assist with their cleanup programme. However, heavy machinery was also required to clear the streams of vegetation that was blocking water flow. The grass cutter is an added bonus to the existing community tools used to keep the bushes in and around the streams under control. Likewise CIRCS stores the grass cutter for Ngatangia to ensure continuity of cleanup programs.

As mentioned earlier, TeAuO Tonga district did not request for funds therefore this allocation was diverted to the island of Aitutaki as a request for help was received from the Island Administrator.

This was also accompanied by a vector control plan for 2009 that was initially presented to government.

Cook Islands had also recently done an assessment on the island and supports the identified mosquito problem. The need was more for chemicals and fuel for the eradication of mosquito breeding grounds. The DREF coordinator and the pest control expert travelled to the island on 3 September to assess the identified problem areas. After a meeting with the ministry of health in Aitutaki, the island administration and CIRCS visited the proposed risk areas. Following, it was unanimously agreed that the best approaches were to:

- a. Apply larvaecide to stagnant water areas followed by the spraying of specified dense bush areas of Vaipeka village. Crabs are also in abundance in this area as crab holes are water holding vessels. Although, there were only two reported cases of dengue in this area, the urgent request from the Island Administration seemed a necessary proactive assistance to their problem. In the past spraying programmes have been on going when chemicals are available. However, there is more a need for larvicides to disrupt the mosquito cycle and control its population.
- b. CIRCS volunteers spend about 15 minutes educating the community on dengue fever; its signs and symptoms; and its prevention and eradication measures at each home visit. Most importantly educating the people on how to properly care for water storages e.g. tight lids or covers. Aitutaki homes have tapped water but too saline for human consumption. People take every opportunity to harvest rainwater for drinking; water tanks, plastic containers and so on. However, most are not properly covered.
- c. Distribution of vector control packs to continue. All identified beneficiaries and surrounding homes have now received their packs.
- d. More awareness on television and radio in the local dialect.

It was also noted that most homes on the island have well kept yards. The lawn is kept short, there is little or no evidence of cans, coconut shells and any other small water holding vessels. However, the majority of homes have water tanks and other big water storage tanks. The public health officer informed the Pacific regional office that inspections done in the past revealed that water storage tanks in homes are not tightly covered and are infested with larvae. The volunteer distributors have been fully advised to educate people the importance of tightly covered water storages. Other posing problems in all the villages are the old communal water tanks installed by the government in the colonial days. These have become derelict and are mosquito breeding grounds as more homes prefer their own water tank.

As such, the request for assistance to CIRCS from the Island Administration included larvaecide for the water tanks. Discussions with the public health and island administration on the restoration of the derelict water tanks is not an option. During visits around the various villages, it was noted that only a few of these communal water tanks are being used. It was pointed out to the

government agencies that with evidences of climate change, preserving watersheds is one of the adaptation measures encouraged in communities and these water tanks should be restored.

A decision was reached and agreed upon by the ministry of health, Island Administration, the pesticide experts and the CIRCS DREF coordinator that larvaecides and adultecides were a priority. The ministry of health has a sufficient supply of adultecide pyrethrum sprays. Two back pack knapsacks were purchased and two mist sprayers were taken out of the relief containers at CIRCS national headquarters. These were at Rarotonga and were also shipped over to assist with the spraying programme. These and any other non-perishable items remain the properties of CIRCS. Fuel for the machinery to assist the community during their clean up programme of vacant properties was also prioritized.

The pest control expert had also air freighted three containers of VectoBacs to Aitutaki. VectoBacs which are larvaecides and three containers were enough to start the operation while waiting for more stock ordered from New Zealand. Unfortunately, the weather conditions during this time were unfavourable to carry out both operations. It too windy for spraying, and the heavy rain would wash away the larvaecides.

A week after the weather was more favourable, both operations were carried out by the public health officers. More pesticides arrived on 21 September and were shipped to Aitutaki. The DREF coordinator will revisit the island to assess the success of this operation.

Emergency health (dengue outbreak prevention)

Objective 2: Up to 200 family vector-control kits³ are distributed to support up to 1,200 people in Rarotonga, Aitutaki and Mauke islands.

Activities planned were:

1. Procurement of items for the kits
2. Identification and selection of the beneficiaries and communities with the national council
3. Preparation and distribution of the kits by the volunteers and stakeholders
4. Consultation with community stakeholders
5. Dissemination of information
6. Fuel support to the national teams in the use of heavy machinery

As indicated in the interim report, vector control kits were purchased and packed in plastic bags ready for dissemination to beneficiaries. Each pack contained the following; one fly spray; one insect repellent roll on; one mosquito net; one pack mosquito coils; one card of paracetamol and two educational brochures. A beneficiaries list was obtained from the ministry of health on a daily basis. Communications on updating daily reported cases worked two ways whereby the ministry of health will advise CIRCS of any reported cases and CIRCS would immediately distribute the vector packs. The project was delivered according to the changes suggested by the ministry of health in distributing the family vector kits to the families who has an infected person/s in the home rather than giving the supplies as a pro-active action.

Initially, it was agreed that the distribution was to begin where the first and most cases were identified, however later, the Ministry decided to take a different approach and that is to move to the next affected area and continue from there. After the first few distributions, some of the distributors reported that some families returned the vector packs as they could afford their own and wanted less fortunate families to receive them. Concerns from the people in the community were that the vector control packs should be distributed before a person is affected by dengue. The ministry of health and CIRCS took this into consideration including the distribution list. Immediate homes that surround the home of the infected person is provided with a vector kit as

³ A family kit (for six people) lasts for one month and consists of one aerosol mosquito repellent (adult), one roll-on repellents (child) and one aerosol cans of house spray insecticide and one mosquito net.

well. This change was most appreciated by the non-affected people. As mentioned earlier each beneficiary would indicate on the forms provided: how many people and of what age, live in the same household. This information enabled CIRCS to monitor how many people benefit from the vector control packs.

50 packs were dispatched to Aitutaki as there were 25 reported cases; and 30 packs were dispatched to Mauke with 16 reported cases. Unfortunately, CIRCS was short of mosquito nets. Therefore, the Aitutaki vector control packs were distributed initially without the nets. More nets were ordered at the end of June from New Zealand which arrived late August. The 50 nets for Aitutaki accompanied the DREF coordinator during her visit to Aitutaki. CIRCS' YPE volunteers were again engaged in the distribution of the nets to the same recipients who received the packs previously. This enabled the volunteers to revisit the recipients and evaluate the impact of the awareness and education done in the community.

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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[**<final financial report below; click here to return to the title page>**](#)

International Federation of Red Cross and Red Crescent Societies

MDRCK001 - Cook Islands - Dengue Outbreak

Final Financial Report

Selected Parameters	
Reporting Timeframe	2009/5-2010/1
Budget Timeframe	2009/5-2009/9
Appeal	MDRCK001
Budget	APPEAL

All figures are in Swiss Francs (CHF)

I. Consolidated Response to Appeal

	Disaster Management	Health and Social Services	National Society Development	Principles and Values	Coordination	TOTAL
A. Budget	50,000					50,000
B. Opening Balance	0					0
Income						
<u>Other Income</u>						
<i>Voluntary Income</i>	50,000					50,000
C5. Other Income	50,000					50,000
C. Total Income = SUM(C1..C5)	50,000					50,000
D. Total Funding = B + C	50,000					50,000
Appeal Coverage	100%					100%

II. Balance of Funds

	Disaster Management	Health and Social Services	National Society Development	Principles and Values	Coordination	TOTAL
B. Opening Balance	0					0
C. Income	50,000					50,000
E. Expenditure	-45,718					-45,718
F. Closing Balance = (B + C + E)	4,282					4,282

International Federation of Red Cross and Red Crescent Societies

MDRCK001 - Cook Islands - Dengue Outbreak

Final Financial Report

Selected Parameters	
Reporting Timeframe	2009/5-2010/1
Budget Timeframe	2009/5-2009/9
Appeal	MDRCK001
Budget	APPEAL

All figures are in Swiss Francs (CHF)

III. Budget Analysis / Breakdown of Expenditure

Account Groups	Budget	Expenditure					TOTAL	Variance
		Disaster Management	Health and Social Services	National Society Development	Principles and Values	Coordination		
A							B	A - B
BUDGET (C)		50,000					50,000	
Supplies								
Medical & First Aid	33,022	16,264				16,264	16,758	
Utensils & Tools	3,342	1,583				1,583	1,759	
Other Supplies & Services		11,073				11,073	-11,073	
Total Supplies	36,364	28,920				28,920	7,445	
Transport & Storage								
Distribution & Monitoring	668						668	
Transport & Vehicle Costs	5,049	6,921				6,921	-1,872	
Total Transport & Storage	5,717	6,921				6,921	-1,203	
Personnel								
National Society Staff		138				138	-138	
Total Personnel		138				138	-138	
General Expenditure								
Travel		1,158				1,158	-1,158	
Information & Public Relation	4,000	4,894				4,894	-894	
Office Costs		113				113	-113	
Communications		273				273	-273	
Other General Expenses	668	330				330	338	
Total General Expenditure	4,668	6,768				6,768	-2,099	
Programme Support								
Program Support	3,250	2,972				2,972	278	
Total Programme Support	3,250	2,972				2,972	278	
TOTAL EXPENDITURE (D)	50,000	45,718				45,718	4,282	
VARIANCE (C - D)		4,282				4,282		