

# DREF operation



International Federation  
of Red Cross and Red Crescent Societies

## Kenya: Measles Outbreak

DREF operation n° MDRKE017  
GLIDE n° EP-2010-000263-KEN  
29 April 2011

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 and Red Crescent emergency response. 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.

**CHF 299,869 has been allocated from the Federation's Disaster Relief Emergency Fund (DREF) to support the National Society in delivering immediate assistance to some 883,796 children. Unearmarked funds to repay DREF are encouraged.**

**Summary:** Kenya has been implementing a successful routine vaccination over the years, in an effort to achieve herd immunity for each of the vaccine preventable diseases. However, over the past three years, the country has been experiencing recurring outbreaks of vaccine preventable diseases, mainly measles, polio and pertussis. As a result, the Division of Vaccines and Immunizations (DVI) in the Ministry of Public Health and Sanitation (MoPHS), with support of partners, conducted vaccination campaigns in response to the outbreaks, including the National Integrated Measles Campaign conducted in 2009. The campaigns also form part of a strategy to reduce the number of susceptible individuals by boosting vaccination coverage towards the herd immunity threshold.

The DVI has requested for support from key partners, to conduct a measles vaccination campaign in 22 districts within 3 provinces (Rift Valley, Nairobi and North Eastern) following an outbreak of measles that was reported in these districts. According to the MoPHS, a total of 1,046 cases of Measles have been line-listed between 27 December 2010 and 14 April 2011, with 427 cases being listed in April alone. A total of 80 of these cases have been confirmed as measles using serological tests and 11 deaths from measles have been confirmed this year (Case Fatality Proportion of 11.1%). The campaign was initially planned for 57 districts considered as high risk (which are approaching the threshold for outbreaks). However, this has since been revised to 22, due to financial constraints.

Since Nairobi Province is easily accessible by mass media, the MoPHS-led measles technical working group has proposed mass media and road shows as the main strategy to conduct social mobilization there. Other areas pose challenges. The Kenya Red Cross Society (KRCS) therefore proposes to direct its efforts towards supporting the hard to reach areas, mainly targeting 14 of the 22 districts, specifically in the greater Turkana districts in Rift Valley Province and multiple districts of North-Eastern Province. In these areas, Red Cross community volunteers will support interpersonal communication with child caregivers, reaching schools, social gatherings and public address campaigns. The volunteers will visit households before, during and after vaccination to ensure all eligible children are vaccinated. During the campaign itself, the volunteers will also assist in registration and crowd management. KRCS will also support the exercise logistically, utilizing its vehicles for movement of vaccines and personnel, as well as supervision of social mobilization across the vast and arid area.

This operation is expected to be implemented over 3 months, and will therefore be completed by 31 July 2011; a Final Report will be made available three months after the end of the operation (by 31 October 2011).

[<click here for the DREF budget, here for contact details, or here to view the map of the affected area>](#)

## The situation

Kenya has had a successful immunization programme with achievement of high targets in most of its districts and has been conducting active case based surveillance for measles, Polio and Neonatal Tetanus supported by the Expanded Programme on Immunization (EPI). However, the risk of outbreaks of those diseases has remained high due to conflict situations in the neighbouring countries—making it difficult to have effective disease control programmes—and constant mass migrations and population displacement.

**Table 1 Current measles situation in Kenya.**

District	Province	Cummulative cases since onset of current outbreak	Lab confirmed cases	Deaths in the current outbreak	CFR%	Cases since beginning of the current month.	No of Deaths in the month	Onset of current outbreak	Date last case was reported	Current admission	Reported cases in the last one week	Lab confirmed cases in the last one week
Turkana N.	RVP	36	9	0	0	0	0	12-27-10	28-02-11	0	0	0
Kamukunji	Nairobi	231	14	2	0.866	26	0	19-01-11	04-06-11	0	25	0
Lagdera	NEP	2	2	0	0	0	0	01-11-11	01-12-11	0	0	0
Garissa	NEP	35	3	1	2.9	10	0	02-10-11	04-12-11	0	6	0
Wajir East	NEP	24	5	0	0	3	0	14-02-11	03-11-11	0	3	0
Wajir N.	NEP	18	2	0	0	0	0	02-03-11	03-04-11	0	0	0
Starehe	Nairobi	174	5	5	2.874	61	0	21-01-11	04-08-11	0	62	0
Masinga	Eastern	1	1	0	0	0	0	20-01-11	20-01-11	0	0	0
Mandera W.	NEP	89	6	1	1.124	28	0	22-01-11	04-11-11	0	21	0
Fafi	NEP	19	6	0	0	3	0	01-11-11	04-04-11	0	3	0
Turkana S.	RVP	1	1	0	0	0	0	03-03-11	03-03-11	0	0	0
Butere	Western	1	1	0	0	0	0	30-12-10	30-12-10	0	0	0

Source: Division of Disease Surveillance and Response

### Nairobi

Kamukunji District which appears to be the epicentre of the current measles outbreak is one of the newly formed districts in Nairobi located in the Eastern part of Nairobi and home to Eastleigh Estate (a predominantly Somali community settlement). The first case of the measles outbreak was reported on 27 December 2010 at a health facility near Kakuma Refugee Camp in Turkana district. This child under five years was reported to have travelled to Eastleigh Estate prior to the outbreak. The district has 65 health facilities (only 11 are government sponsored), 31 of which are offering immunization services. The number of children targeted for Measles vaccination in 2010 SIAs (Supplement Immunization Activities) were 9,840 but 7,694 (78%) were vaccinated.

The surveillance team used “Persons of all ages living in Eastleigh or history of visiting Eastleigh admitted or not admitted at a health facility with fever, generalized maculo-papular rash lasting  $\geq 3$  days, and/or cough, coryza, conjunctivitis from 15 December 2010” as the case definition during the investigation. A total of 407 cases (231 in Kamukunji, 174 in Starehe and 2 in Nairobi West) were line listed as at 14 April 2011.

Seven deaths have been confirmed in Nairobi (5 in Starehe [CFP 2.87%] and 2 in Kamukunji [CFP 0.87%]). Their mean age was 6 years with the youngest being 3 months old and the oldest 42 years. 52% of measles cases were female. The largest proportion of cases was in the 9-60 months age group. The initial case had a date of onset on 1 January 2011. The peak of the outbreak was on 29 January 2011. The last case was noted on 22 February 2011. Only about one quarter of these cases were vaccinated (one or two doses). Twenty four percent (24%) of the cases had never been vaccinated, 22% had unknown immunization status and 29% had missing data.

### North-Eastern Province: Mandera District

Based on record review and information from the community, the index case was a 36-year-old man who was identified by the nomadic mobile clinic on 22 January 2011. The date of onset of the index case was 15 January 2011. The index case had travelled to Moyale across the Ethiopia border where it was reported that 3 members of the visited family had measles. The index case transmitted the infection to his family members and individuals in the neighbourhood, which marked the beginning of the outbreak in the district. The first

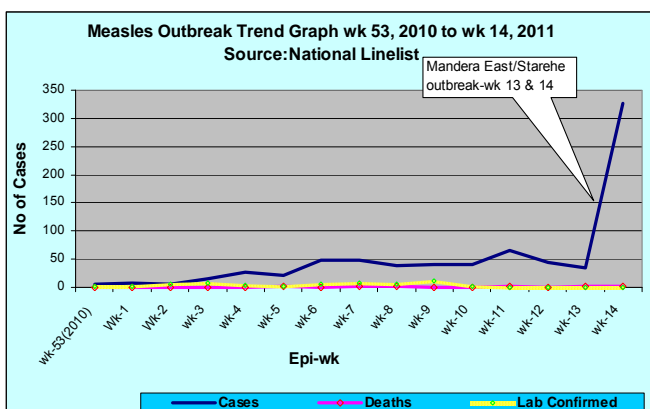
peak was noted on 27 January 2011 after which several other peaks appeared suggesting human-to-human spread of the infection.

In Mandera West, a total of 89 cases with 1 death (CFR-1.3) were line listed as of 14 April 2011. The mean age was 18 years, with the youngest being 10 months and the oldest 49 years old. Of the total measles cases that were line listed, Choroqo Village in Malkamari Division contributed 80% of the cases. It is worthy noting that 97% of the cases were never vaccinated. A total of 413 cases (with two deaths) were line listed in Mandera East. Some 296 new cases have been reported in this district in the month of April alone. The mean age was 5 years, with the youngest being 2 months and the oldest at 24 years old. Of the total measles cases line listed, 50% were from B/Nguvu. Only 45% were confirmed to be immunized.

### Wajir District

The outbreak started on 25 January 2011 when the index case was first detected at Guba dispensary in the district. A total of 7 cases were reported in that dispensary within that week. On 7 February 2011, 5 more cases were reported in the neighbouring Banisa Town.

As of 14 April 2011, a total of 18 cases (no deaths) were line listed in Wajir North. The mean age was 9 years, with the youngest being 7 months and the oldest at 30 years old. None of the cases on the line list were immunized. During the same period, a total of 24 cases (no deaths) were line listed in Wajir East. The mean age was 22 years, with the youngest being 7 months and the oldest at 50 years old. Only one individual on the line list was vaccinated (95% unimmunized).



Source: Division of Disease Surveillance and Response

### Garissa District

Fafi and Lagdera Districts (in larger Garissa County) which borders Somalia and home to over 300,000 Somali Refugees hosted in Dadaab refugee Camp have also reported cases. The outbreak situation in North Eastern province is compounded by the ongoing severe drought that has compromised the nutrition status, poor immunization status and high drop out rate in some districts (all reported cases have 0 dose) and lack of water to maintain basic hygiene.

In Garissa, a total of 35 cases (1 death) were line listed as of 14 April 2011. The mean age was 11 years, with the youngest being 5 months and the oldest at 36 years old. Of the total measles cases line listed, 96% were from Saka Junction. None of the cases on the line list had proof of vaccination (61% unimmunized, 39% unknown or blank). In Fafi, a total of 19 cases (no deaths) were line listed. The mean age was 8 years, with the youngest being 5 months and the oldest at 40 years old. Of the total measles cases line listed, all were from Hagadera. Forty four percent were unimmunized.

### Rift Valley province: Turkana District

The index case was reported on 27 December 2010 at a health facility in Kakuma Refugee Camp in Turkana. This was a child under five years who was reported to have travelled to Eastleigh Estate (A Somali community dominated estate in Nairobi's Kamukunji District) prior to the outbreak. The district has reported 10 confirmed cases and line-listed a total of 37 cases, the oldest being a 22 years old with no history of measles vaccination. Some of the cases have been reported within the Kakuma Refugee Camp whilst others are within the host community. The camp is reported to have routine immunization coverage of 89% and the United Nations High Commissioner for Refugees (UNHCR) as well as other implementing agencies have implemented a mop-up campaign.

Following identification and laboratory confirmation of the measles cases, the MoPHS, with support of KRCS and other partners, is also planning to conduct an integrated measles vaccination campaign between 4<sup>th</sup> and 8<sup>th</sup> May 2011. The campaign is focussing on 22 districts; although 57 districts had previously been considered high risk, 35 districts have since been dropped due to constraints in financing the campaign.

## Coordination and partnerships

The Ministry of Public Health and Sanitation is the convener of all coordination meetings and has taken the lead role in coordination of campaigns with technical support from World Health Organization and the United

Nations Children's Fund, Eastern and Southern African Region (**UNICEF-ESARO**). The MoPHS has also stepped up active surveillance and analysis of surveillance information for ease of identification of districts that are reaching the threshold for outbreaks. UNICEF has supported the procurement of vaccines and partly, the development, production and distribution of IEC materials. UNICEF and WHO are also supporting the media campaigns for social mobilization. The Centres for Disease Prevention and Control and the Kenya Medical and Research Institute are supporting the operation in case investigation and laboratory analysis. Kenya Red Cross Society will support the campaign through social mobilization and logistics. The IFRC East Africa Regional Representation Office, from the beginning of measles outbreak, has supported KRCS by participating in coordination meetings together and liaising with potential donors.

## Red Cross and Red Crescent action

Intensive planning and resource mobilization is currently ongoing in preparation for the campaign, including the following activities:

1. Enhanced surveillance – sensitize all health workers to be on high alert and to report all suspect measles cases as per the measles case definition, investigation and reporting guidelines.
2. Maintenance of updated line list of all cases since the onset of the outbreak on a daily basis with daily updated cases/deaths and the line list submitted to DDSR (Division of Disease Surveillance and Response) daily
3. Continuous serological laboratory analysis and immediate feedback for action
4. Case management as per measles guidelines. This also includes training/sensitization of all health workers on measles case management.
5. Strengthening of routine vaccination including outreach vaccination services especially in high-risk low coverage areas and along population movement pathways.
6. Health education/social mobilization to sensitize the public on the measles outbreak and their responsibilities in the prevention and control
7. District Coordination and planning with all stakeholders for preparedness and response

## The needs

Based on the situation above, KRCS plans to assist 883,796 children receive Measles Vaccine and Vitamin A during the 3 months of the operation:

- Turkana District: 167,886 children aged 6-59 months in Turkana North, Turkana Central and Turkana South,
- North-Eastern Province: 715,910 children aged 6 months to 14 years in Mandera Central, Mandera East, Mandera West, Garissa, Fafi, Ijara, Wajir North, Wajir East, Wajir West, Wajir South and Lagdera.

## The proposed operation

The National Society aims to provide assistance to vulnerable communities as a contribution to Measles outbreak control efforts in Kenya, hence reducing related morbidity, mortality and disability. KRCS will support pre-campaign activities geared towards awareness creation and social mobilization a week before the set dates for the campaign. This will mainly target North-Eastern Province and vast Turkana District. KRCS community volunteers will be equipped with simple messages in local language for household based interpersonal communication (currently in development) and dissemination in community social gatherings.

KRCS will also support MoPHS to implement the mass vaccination campaign through social mobilization in 14 of the 22 districts affected by measles including greater Turkana district (Turkana North, Turkana Central and Turkana South Constituencies —a vast hardship area covering 77,000 KM<sup>2</sup>) and North-Eastern Province (Mandera Central, Mandera East, Mandera West, Garissa, Fafi, Ijara, Wajir North, Wajir East, Wajir West, Wajir South, Lagdera).

In North Eastern and Turkana, KRCS through its network of volunteers will support in *manyatta* to *manyatta*<sup>1</sup> interpersonal communication with children's caregivers, reaching schools, social gatherings and public address campaigns. The volunteers will visit households before, during and after vaccination to remind and follow-up to ensure all eligible children are vaccinated. During the campaign, the volunteers will also assist in registration and crowd management. Each district will have an immunization focal person (District Focal Person) who will ensure coordination with all stakeholders. Districts will also have one coach per division (6 divisions per district) who will be in charge of training and supervision of volunteers at the division level in collaboration with other stakeholders as well as 15 volunteers per division who will be engaged in social mobilization.

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<sup>1</sup> a community made up of several huts enclosed by a fence

KRCS will also support the exercise logistically through commitment of part of its fleet vehicles for movement of vaccines, personnel and supervision of the social mobilization exercise in the vast districts. One land-cruiser will be covering each of the 14 districts. In addition, 50 motorcycles will be used by the coaches in supervisory activities.

At national level, KRC will actively participate in the planning meetings as a member of the measles technical working group, led by the MoPHS, as well as advocacy, communication and social mobilization taskforce.

## Emergency health

**Objective a): To increase community awareness and utilization of measles and other vaccine preventable diseases prevention and control interventions in 14 districts of North-Eastern and Rift Valley provinces for 3 months**

### Activities planned:

- Train/sensitize 1,379 KRCS Volunteers (KRCV)/Community own Resource Persons(CORPs) on detection and reporting of measles and other notifiable diseases. (community surveillance)
- Conduct continuous intensive measles case search and report to relevant authorities. (community surveillance)
- Pre-register all children under the age of five years noting their vaccination status for ease of follow up
- Implement house to house, community social mobilization through organized community gatherings (*barazas*), and existing social gatherings including churches, mosques and markets, to sensitize the public on the measles outbreak and preventive measures including childhood vaccination

**Objective b): To support the capacity of MoPHS in achieving at least 95% immunization of children aged below five years in 14 districts of North-Eastern and Rift Valley provinces through social mobilization**

### Activities planned:

- Train 17 district focal persons, 102 coaches and 1,260 volunteers on measles immunization campaigns, including code of conduct, key messages to be delivered and procedures to be followed, and ensure supportive supervision is provided.
- Conduct house-to-house follow-ups for immunization status verification for all registered children.
- Social mobilization through schools, house to house, organized community gatherings (*barazas*), and existing social gatherings including churches, mosques and markets at least 2 weeks before the campaign and also during the campaign.
- Support in media campaigns, road shows and Public Address strategy.
- Support in development and production of key IEC materials including posters, frequently asked questions sheets, sun visors, case definitions and identification kits.
- Conduct continuous community education on importance of immunization, vaccine safety and encouraging parents to have children immunized (to continue after the campaign)
- Provide logistical support for movement of teams/volunteers and supplies for social mobilization and immunization activities through the provision of 20 back-up vehicles to the MoPHS, to support in the movement of vaccines, vaccinators and supervisors.
- Post campaign Follow-ups; the volunteers will re-visit all the households to ensure that the registered children were immunized. Those not immunized will be referred to the nearest health facilities for the measles vaccines.
- Provide communication system back up in remote areas through use of vehicle-installed HF radio system in areas with poor communication infrastructure.

## How we work

**All 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 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.

## Contact information

For further information specifically related to this report, please contact:

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**[<DREF budget and map below; click here to return to the title page>](#)**

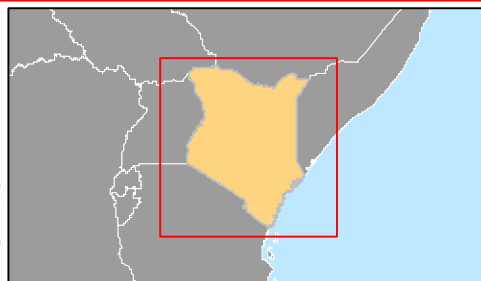
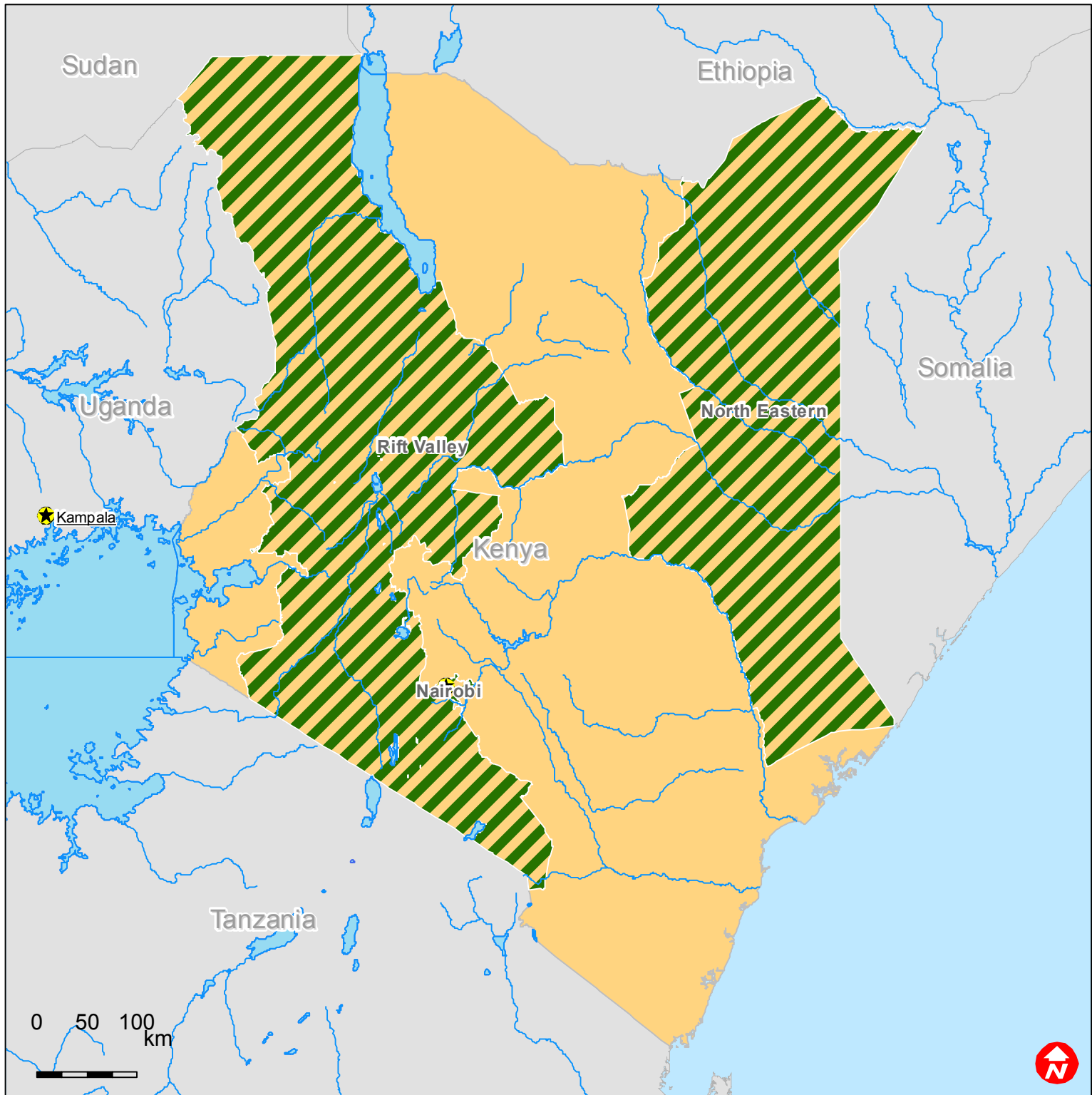
**BUDGET SUMMARY**

Budget Group	DREF Grant Budget	TOTAL BUDGET CHF
Shelter - Relief	0	0
Shelter - Transitional	0	0
Construction - Housing	0	0
Construction - Facilities / Infrastructure	0	0
Construction - Materials	0	0
Clothing & Textiles	0	0
Food	0	0
Seeds & Plants	0	0
Water & Sanitation	0	0
Medical & First Aid	0	0
Teaching Materials	0	0
Utensils & Tools	0	0
Other Supplies & Services & Cash Disbursements	0	0
<b>Total Supplies</b>	<b>0</b>	<b>0</b>
Land & Buildings	0	0
Vehicles	0	0
Computer & Telecom	0	0
Office/Household Furniture & Equipment	0	0
Medical Equipment	0	0
Other Machinery & Equipment	0	0
<b>Total Land, vehicles &amp; equipment</b>	<b>0</b>	<b>0</b>
Storage	0	0
Distribution & Monitoring	12,392	12,392
Transport & Vehicle Costs	71,434	71,434
<b>Total Transport &amp; Storage</b>	<b>83,825</b>	<b>83,825</b>
International Staff	0	0
Regionally Deployed Staff	0	0
National Staff	71,747	71,747
National Society Staff	0	0
Other Staff benefits	0	0
Consultants	0	0
<b>Total Personnel</b>	<b>71,747</b>	<b>71,747</b>
Workshops & Training	45,067	45,067
<b>Total Workshops &amp; Training</b>	<b>45,067</b>	<b>45,067</b>
Travel	0	0
Information & Public Relation	43,682	43,682
Office Costs	0	0
Communications	37,246	37,246
Professional Fees	0	0
Financial Charges	0	0
Other General Expenses	0	0
<b>Total General Expenditure</b>	<b>80,928</b>	<b>80,928</b>
Cash Transfers to National Societies	0	0
Cash Transfers to 3rd parties	0	0
<b>Total Contributions &amp; Transfers</b>	<b>0</b>	<b>0</b>
Program Support	18,302	18,302
<b>Total Programme Support</b>	<b>18,302</b>	<b>18,302</b>
Services & Recoveries	0	0
Shared Services	0	0
<b>Total Services</b>	<b>0</b>	<b>0</b>
<b>TOTAL BUDGET</b>	<b>299,869</b>	<b>299,869</b>





# Kenya: Measles



Provinces targeted  
