



**ANNUAL REPORT OF
THE HUMANITARIAN / RESIDENT COORDINATOR
ON THE USE OF CERF GRANTS**

Country	Tanzania
Humanitarian / Resident Coordinator	Oscar Fernandez – Taranco
Reporting Period	January 1, 2007 – December 12, 2007

I. Executive Summary

Confirmed cases of Rift Valley Fever (RVF) in animals and humans were reported in Somalia and on the Kenyan side of Tanzania's northern border on November 2006. By early 2007 the outbreak appeared to be moving south to the Tanzanian border. This raised concern about the potential for the outbreak spreading or emerging in Tanzania. On the 31st January 2007, two patients were admitted to Arusha Regional Hospital with signs and symptoms suggestive of RVF. Both patients died soon after. A team comprising of the World Health Organization (WHO), the Centre for Disease Control (CDC), the Ministry of Health and Social Welfare (MoHSW), Muhimbili University, Veterinary, Regional and District teams was assembled to address the problem. Post mortem examinations confirmed that both patients had RVF.

In order to stop a potential pandemic in both animals and humans, a request for Central Emergency Response Fund (CERF) funding through its rapid response window was put forward in April 2007 by the Resident Coordinator (RC). Three United Nations (UN) agencies, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Children's Fund (UNICEF) and WHO undertook CERF-assisted activities with the common objective to prevent the spread of RVF to non-infected areas in order to save lives and prevent suffering.

The \$1.2 million allocated from CERF's rapid response window enabled humanitarian partners to initiate life-saving interventions in a timely fashion. In light of the nature of RVF, which causes severe disease and death in both animals and humans, as well as economic losses and the potential loss of livelihoods for pastoralists in particular. Rapid funding was crucial as the RVF outbreak occurred right before the start of the rainy season which would have accelerated the spread of the disease thereby posing further threats to human lives.

The CERF funding contributed significantly to the reduction in human cases; research shows that in RVF outbreaks the majority of human deaths are caused by practices that favour disease transmission hence the life-saving role of rapid diagnostic, epidemiological assessment and rapid design and implementation of social mobilisation and health promotion efforts.

FAO reported in May 2007 that 680 cattle, 56,990 goats, and 32,900 sheep were affected and of these 1,729 cattle, 19,119 goats and 12,124 sheep had aborted. Steps taken by the Ministry of Livestock Development included purchase of 5.5 million doses of RVF vaccine and provision of equipment and funds to the Districts affected by the RVF outbreak. As of 9th November 2007, 4.2 million animals had been vaccinated. Political leaders from different sectoral Ministries played a crucial role in the RVF control strategies by mobilising and educating the public. Please see the figures in annex two for further details on the spread of RVF.

The Government declared end of RVF epidemic at the end of June 2007, having had no new cases for one month. In total there were 307 cases reported, with 142 deaths.

Region	Reported Cases	Deaths
Arusha	12	3
Dodoma	172	92

Singida	45	20
D'Salaam	1	1
Morogoro	54	13
Manyara	6	4
Tanga	1	1
Mwanza	5	4
Iringa	6	2
Coast	6	2
Total	307	142

Total amount of humanitarian funding required and received (per reporting year)	Required: \$2,280,767 Received: \$1,200,061			
Total amount of CERF funding received by funding window	Rapid Response: \$1,200,061 Underfunded: Grand Total: \$1,200,061			
Total amount of CERF funding for direct UN agency/IOM implementation and total amount forwarded to implementing partners	Total UN agencies/IOM: \$1,200,061 Total implementing partners:			
Approximate total number of beneficiaries reached with CERF funding (disaggregated by sex/age if possible)	Total	under 5 years of age	Female (If available)	Male (If available)
	10 million			
Geographic areas of implementation	Dodoma, Arusha, Tanga, Manyara, Morogoro, Kilimanjaro, Iringa and Singida and coastal regions			

The funds received by UNICEF were directed towards awareness-raising campaigns and behaviour modification as the majority of human cases were found to be due to behaviour and practices favouring transmission of the disease. The campaigns targeted the general public, especially children and specific groups, for instance livestock keepers, abattoir staff and refugees. As requested by the Ministry of Health and Social Welfare (MoHSW), the funds received by WHO were directed towards urgent strengthening of the response capacity relating to outbreak investigation, surveillance and to basic inputs needed in the case of RVF: drugs, supplies, equipment and laboratory reagents. Support provided by FAO was used to strengthen institutional capacity for RVF surveillance and diagnosis.

It is difficult to disaggregate the beneficiaries by age and sex, however, it is estimated that approximately ten million people were reached through the various activities at national, district and community level.

II. Coordination and partnership building

a) Decision-making process

The decision-making process was influenced by the high risk of RVF infection in both humans and animals and by the identification of key challenges to an effective response; for example, it was acknowledged that:

- The public was ill-informed about RVF;
- Information had been at times misleading which led to unnecessary fears and scares;
- Tanzania had little means for early detection and reporting, hence early preparedness and response capacity was not optimal.

It was therefore decided that UN agencies should work together with other partners, but with a clear division of roles:

- FAO to focus on animal health;
- WHO to focus on human health;
- UNICEF to focus on raising awareness;
- The National Disaster Preparedness and Response Unit that deals with disasters including Avian Influenza and others was responsible for overall coordination of RVF preparedness and response.

b) Coordination amongst the humanitarian country team

- The MoHSW served as the focal point for all matters related to RVF;
- Laboratory investigations were done with support of Centre for Disease Control (CDC) Kenya Medical Research Institute (KEMRI);
- WHO supported four rapid response teams which surveyed Tanga, Arusha, Dodoma and Morogoro;
- WHO, UNICEF, FAO, World Food Programme (WFP) and United Nations Development Programme (UNDP) met several times;
- Samples from animals were collected by the Ministry of Livestock Development (MoLD) and were examined. The results were late in coming and did not provide useful information in control efforts in human beings.

c) Partnerships

The main partners involved in the RVF campaign were: MoHSW, CDC-KEMRI, WHO, UNICEF, FAO, WFP, UNDP and the MoLD.

d) Prioritization process

The overall objective was to prevent the spread of the disease to non-infected areas in order to save lives and prevent human suffering while strengthening early warning activities.

More specifically, the objectives were to:

- Improve safe management of infected animals and humans;
- Establish the magnitude of RVF outbreaks through active and passive surveillance including rumour investigations in order to save the lives of both humans and animals;
- Encourage use of acaricides/insecticides reducing human contact to mosquito and other means in which spread of RVF is possible;
- Advocate behavioural changes for farmers and the general public through targeted public awareness campaigns at National and Community levels;
- Coordinate activities within frontline institutions in charge of animal/human health to prevent further RVF contaminations.

III. Implementation and Results

In light of the nature of RVF, which causes severe disease and death in both animals and humans, economic losses and the potential loss of livelihoods for pastoralists in particular, the CERF funding enabled to initiate life-saving interventions in a timely fashion. This was crucial as the RVF outbreak occurred right before the start of the rainy season which would have accelerated the spread of the disease thereby posing further threats to human lives.

The CERF funding contributed significantly to the reduction in human cases; research shows that in RVF outbreaks the majority of human deaths are caused by practices that favour disease transmission hence the life-saving role of rapid diagnostic, epidemiological assessment and rapid design and implementation of social mobilisation and health promotion efforts.

FAO

Prior to the start of the CERF project, FAO supported the Government veterinary services to survey 344 villages in 59 districts, and established that 72 villages in 29 districts were affected by the disease. Through the CERF project, FAO then provided RVF diagnosis laboratory equipment to all Veterinary Investigation Centres (VICs) in Tanzania. In addition training sessions took place for 152 field staff including meat inspectors and 50 laboratory technicians and veterinarians from all VICs. The training focused on sample collection, processing, transportation, storage and above all laboratory diagnostic tests in order to establish the spread of the disease and therefore put in place appropriate measures. FAO also supported the establishment of active surveillance activities through the VICs as shown in the report. The control of animal movements was taken care of by District Veterinary Officers, Meat Inspectors, and Animal Movement Control Officers in all Districts. Finally, vector control was intensified

whereby acaricide was provided by the Government to seriously affected areas such as Dodoma Region. Please see annex three for all the acronyms used by FAO.

Activities of the FAO were implemented by the Ministry of Health and Social Welfare (MoHSW) in 29 districts which had recorded RVF cases between January and May 2007. The campaign targeted the general public (including NGOs, community leader's primary and secondary schools) as well as specific risk groups (health/veterinary personnel, staff at abattoirs and livestock keepers/owners). It provided information to regions and districts level staff which in turn undertook community awareness and induced behavioural change campaigns at village level. Awareness messages included RVF spreading modes, what to do and what not to do in the event of an outbreak, how livestock keepers, veterinary and paraprofessionals can avoid being infected, why to avoid eating non-inspected raw or undercooked meat (especially blood and/or liver which are known to be a perfect host for the RVF virus).

With the surveillance system put in place through this project the Government and FAO were able to identify positive sample sites through geo-referenced data. Steps have been taken to store this data in Trans-boundary Animal Diseases (TAD) information network. Reports of RVF have been submitted to the Office for International Epizootics (OIE) and are available through the World Animal Health Information System (WAHIS). These include one immediate notification report and five follow-up reports. By knowing exactly the location of RVF infected areas for the year 2007 and the factors that led to its occurrence, Government is now in a better position to limit the spread of future outbreaks which in Tanzania seem to take place over an eight to ten year cycle.

Veterinary staffs are now well equipped in surveillance methods, laboratory procedures as well as clinical diagnostic techniques. The Department of Veterinary Services (DVS) is now in a position to continue with routine surveillance while the Epidemiology Unit will update the risk map accordingly and disseminate the information to relevant stakeholders when relevant. The CERF funding has assisted diagnostic laboratories to carry out RVF IgG/IgM antibody detection using the Enzyme Linked Immunosorbent Assay (ELISA) technology. The wide array of laboratory equipment and reagents supplied by FAO through the project has enabled VICs to quickly diagnose fatal diseases and therefore report their occurrences to the relevant authorities in a very short time hence helping for control measures to be put in place in the shortest time possible. The CERF project has also assisted the Central Veterinary Laboratory (CVL) to validate or confirm results from VICs much faster than before as well as being able to do virus isolation as opposed to the past where all samples were sent abroad for diagnosis and often results received too late to carry out any meaningful interventions.

UNICEF

UNICEF, in close collaboration with the Ministry of Livestock Development (MoLD), the Ministry of Health and Social Welfare (MoHSW) and the Prime Minister's Office, carried out RVF awareness raising activities in 29 districts affected by the outbreak in Tanzania. These included Arumeru, Babati, Bahi, Chamwino, Chunya, Dodoma Municipal, Hanang, Iringa, Karatu, Kilolo, Kilosa, Korogwe, Kyela, Longido, Lushoto, Manyoni, Mbarali, Mbeya, Monduli, Moshi, Mpwapwa, Mufindi, Mvomero, Ngorongoro, Njombe, Nkinga, Same, Siha and Simanjiro. Under the overall awareness-raising umbrella, activities implemented can be subdivided into the following categories.

Campaign for the general public

With a view to increasing general public's awareness on knowledge of RVF and measures to guard against being exposed and thus contain the epidemic, a total of 1.2 million posters and one million leaflets were designed, printed and distributed in the target districts. These efforts were complemented by the production and airing of TV episodes and promotional spots and radio programmes and spots.

A two-day information-sharing session was organised specifically for 25 mass media personnel from ten media houses in Dar-es-Salaam. These included Tanzania Standard Newspapers, Tanzania Broadcasting Services, IPP Media, Star TV, Habari Cooperation, Mwananchi, Uhuru Publications, Business Times and Tanzania Information Services.

Campaign for specific groups

In recognition of the fact that research has demonstrated that some groups are more vulnerable to being exposed to RVF, targeted campaigns were carried out over the implementation period. These included two behaviour change training sessions for NGO and UN humanitarian staff working within the refugee

programme in North-Western Tanzania and supporting sensitisation meetings on RVF in the refugee camps namely, Mtabila, Lugufu, Nyarugusu, Lukole, Kanembwa and Nduta.

Furthermore, the Ministry of Livestock Development and the Ministry of Health and Social Welfare organised a two-day emergency RVF public awareness event in Dodoma for 160 key medical and veterinary staff, food inspectors and non-governmental organizations (NGOs) at the district levels with a goal of providing them with the information and skills necessary to undertake community awareness at the village levels in the target districts. The village-level sensitisations targeting special at-risk groups such as livestock keepers and traders and were led by Local Government Authorities, local NGOs, and community leaders and covered all the planned 29 districts. In order to facilitate the undertaking of mass awareness campaigns across the districts, UNICEF procured public address systems.

Overall intervention results, confirmed by the consultant recruited for monitoring purposes, indicate that the awareness-raising materials, both printed and audio-visual were produced and distributed in a timely fashion leading to overall effectiveness of the mass campaigns. The trainings and sensitisation meetings targeting various stakeholders were also deemed to have been a successful way to create awareness and foster behaviour change and ultimately to contain the epidemic. The fact that no further RVF cases were recorded since June 2007 demonstrates the degree of success of the project.

WHO

Prior to the implementation of the project, WHO had taken the lead in the technical support to the MoHSW and the Regions affected. The following activities were carried out:

- Case investigations and support to get laboratory results quickly;
- Getting the formal declaration of outbreak from the MoHSW in compliance with International Health Regulations;
- Issuance of a technical information note on the disease to UN agencies, Diplomatic missions and MoHSW;
- Issuance of regular situation reports on the human cases;
- Deployment of technical experts to assess the situation and make recommendations for improved surveillance and response.

The project has achieved the following:

- Assessment of RVF effects in Arusha, Manyara and Dodoma Regions;
- Holding of planning meeting for Rift Valley Fever Response which was attended by officials from the MoHSW at national and regional level and WHO staff in Dar es Salaam from 30th to 31st August. The same meeting came up with a final list of items to be procured in order to strengthen the investigation and response capacity.
- The remaining amount of \$236,723 was used to acquire a list of items which was procured through AFRO and HQ Supplies Offices.
- The list of items and the request letter and support documents to the Regional Director are attached herewith
- The RVF outbreak was controlled by June 2007.

Programme monitoring

In order to ensure the success of the UNICEF-supported emergency response intervention, a monitoring consultant was recruited for a period of one month between July and August 2007 to monitor the implementation and funds utilisation of the RVF awareness raising and behaviour change activities and provide feedback and lessons learnt to be applied for similar activities in future.

The consultant undertook monitoring visits to 50 percent of the 29 targeted campaign districts and had consultations with key officials from the MoLD involved with RVF activities. At district level, the consultant also interviewed the District Executive Officers (DEDs), District Veterinary Officers (DVOs), District Medical Officers, (DMOs), and District Agriculture and Livestock Development Officers (DALDOs) in addition to community leaders and NGO staff.

Constant monitoring of the project was carried out by FAO in partnership with relevant Government authorities in order to ensure that the execution of the project was done as planned and that all equipments purchased were delivered, installed and in good working order. Supervision visits were made

to VIC Arusha, Tabora, Mpwapa and Iringa in addition to examining progress reports, identifying deficiencies and tasking officers in charge of the surveillance exercise to rectify situations when necessary. Shortfalls were determined for each of the VICs in order to establish precisely what additional requirements exist for each of them in case additional funding would be made available now and for potential new outbreaks in the future.

Details of the work carried out by MoLD through this project were presented to the Tanzania Veterinary Association Scientific Conference from 27 to 29 November 2007. The report is available on request directly from MoLD.

An external evaluation of the project is currently underway. In addition, FAO has used other donor fund to carry out a Socio-Economic Impact Assessment on RVF Outbreak in Tanzania.

IV. Lessons learned

- Overall coordination between partners was good as the UN had just completed its Avian Influenza preparedness exercises and the formed committee worked well.
- The Government of Tanzania is hesitant to declare an outbreak in an emergency and this should be taken into a consideration with potential future outbreaks.
- With close collaboration, the mass media became an effective tool to send messages.
- Many of the items that may be required in outbreak response or services are not available or in stock. This situation needs to be improved urgently.
- The time between the approval of CERF funds and the actual release of CERF funds took three weeks, a long time in an emergency situation. When funds were finally released, the financial regulations of the organisations did not allow the country offices to use the funds immediately; hence these regulations should be revised to achieve the best results.
- It was learnt that monitoring should have been carried out throughout project duration and not only towards the end of the intervention.
- A short term as well as a long term disease preparedness and early warning system should be further institutionalised and implemented by all sectors known to be directly or indirectly associated by the RVF scourge.

With regards to RVF

Long standing droughts followed by flooding create favourable conditions for the multiplication of large mosquito populations enabling larva which are known to harbour the RVF virus to hatch in large numbers. The first victim is usually an animal followed by a human. Efforts to control Malaria, being also a mosquito borne disease, will complement those of RVF control and vice versa. In order to prevent further outbreaks successfully, reduction of man-vector contact through the deployment of synthetic pyrethrins in animal dips as well as the free delivery of Long Lasting Insecticide-treated Nets (LLINs) to all the populations in the affected areas in the shortest possible time is necessary. There is a need for the Regional and District leaders to assist in enhancing awareness in controlling transmission of the disease from livestock to humans stressing on proper boiling of milk, thorough roasting and cooking of meat, as well as avoiding the consumption of non-inspected meat as well as incinerating any carcass unfit for human consumption.

The Government should replenish vaccine stock and ensure that vaccination of young animals is as permanent as possible. Post vaccination evaluation should be scientifically made to ensure animals benefit from the activity. All Veterinary diagnostic laboratories including those located at MoLD, MoHSW and Universities should be strengthened so as to diagnose the disease within the country and perform their work safely. A special incentive package should be introduced as an enticement to carry out this work. Finally, it is worth pointing out that the use of local meteorological specialists has been long ignored in anticipating areas with potential flooding and hence RVF disease outbreaks. MoLD should reconsider the importance to give to climatic projections such as the Climatic Outlook Forum which is being held on a regular basis in Kenya.

V. Results

Sector/ Cluster	CERF projects per sector	Amount disbursed (US\$)	Number of Beneficiaries (by sex/age)	Implementing Partners	Expected Results/Outcomes	Actual results and improvements for the target beneficiaries
Communication	07-CEF-037 "Emergency livestock and human health response to control the outbreak of Rift Valley fever in Tanzania"	\$226,026	Approx. 10 million	MoLD, MoHSW	<ul style="list-style-type: none"> Save human lives by promoting behaviour change and emphasising appropriate measures and practices to be used by livestock farmers and general public through targeted awareness campaigns at national and community level. 	<ul style="list-style-type: none"> 1.2 million Posters and one million leaflets on RVF were designed, printed and distributed in the 29 target districts; RVF related TV episodes and promotional spots and radio programmes and spots produced and aired. RVF awareness raising and behaviour change sessions organised for specific groups i.e. 25 mass media staff, humanitarian staff, refugees from six camps, 160 veterinary and medical staff, livestock keepers and traders and food inspectors. <p>As a result of the above results achieved, the level of awareness on RVF, how it spreads and how it is controlled has substantially increased throughout Tanzania. This achievement takes on even greater importance as it has a positive knock-on effect in terms of preventing other diseases, transmitted through eating/handling of uncooked meat or spread through vectors.</p>
Animal Health	07-FAO-015 "Emergency livestock and human health response to control the outbreak of rift valley fever in Tanzania"	\$702,990		FAO, MoLD	<ul style="list-style-type: none"> Train staff in affected and high risk districts on standard surveillance procedures so as to detect the disease on time and ensure surveillance activities are performed in accordance to standards set Supply equipment to undertake surveillance sampling and reporting to their units Define the extent of RVF virus activity in Tanzania Establish data-base in the epidemiology unit of the DVS 	<ul style="list-style-type: none"> All trainees are able to correctly diagnose RVF and take actions promptly. Training of meat inspectors was also completed. Laboratory equipment was procured and installed in the VICs and is now being used. Virus activity defined by serological studies. The real spread of the disease and hence the virus activity has now been determined. Accurately conducted. Database now in place.
Human Health	07-WHO-023 "Emergency livestock and human health response to control the outbreak of rift valley fever in Tanzania"	\$271,045	Appr. 1 million	WHO, MoHSW	<ul style="list-style-type: none"> Save lives by creating awareness and promoting behavioural changes Help by supplying expandable equipment, drug diagnostic kits, lab reagents and other equipment to ensure safe management of affected human and animal cases and prevent the spread to unaffected areas. 	<ul style="list-style-type: none"> Campaigns contributed to shorten the duration and the geographical expansion of the outbreaks, since no new cases were reported since July 2007.

Annex 1 ONE UN response to the RVF epidemic

UNICEF together with the Prime Minister's Office, the Ministry of Livestock Development, the Ministry of Health and Social Welfare carried out RVF mass awareness campaigns – here below are some successful examples of the joint efforts leading to articles and captions on RVF being printed in some of the leading newspapers in the country and thus contributing to a substantial increase in the level of awareness on RVF amongst the population at large.

PM orders 3 deputy ministers to lead RVF monitoring operation

...Meets UN group to discuss strategy to fight disease

THISDAY REPORTER

Dar es Salaam

THE Prime Minister, Edward Lowassa, has directed a team of three deputy ministers to travel to Dodoma Region and jointly monitor the reported eruption of the Rift Valley Fever (RVF) there, it has been learnt.

A statement from the Prime Minister's Office in Dar es Salaam yesterday named the three deputy ministers in the mission as Dr Aisha Kigoda (Health and Social Welfare), Ms Celina Kombani (Regional Administration and Local Government) and Charles Mlingwa (Livestock Development).

The statement said the premier issued the directive following a meeting in his office yesterday with members of the UN emergency coordination group for Tanzania, which offered to raise funds for a national campaign against the disease.

It said the UN group would next

order to agree on a joint strategy for the campaign.

The strategy will then be presented to the permanent secretary in the PMO, to work out an official budget for presentation to potential donors.

Initial budget estimates so far have shown that at least \$4.1m (approx. 5bn/-) is required to mount a successful mission to get rid of the disease, including at least \$2m (approx 2.4bn/-) needed immediately for preparatory activities.

The UN group is led by UNDP Country Representative Oscar Fernandez-Taranco, and also includes country representatives for other UN agencies like FAO, WHO, and UNICEF.

At their meeting with PM Lowassa yesterday, the group stressed the need for regular collection of statistical data from regions affected by the RVF scourge, especially during the current rainy season.

It also said it was ready to help in ensuring close follow-up of various blood samples sent to laboratories outside the country

feedback.

At present livestock blood samples are being sent to labs in South Africa while human blood samples are being checked in Nairobi, Kenya.

Lowassa, meanwhile, said he agreed with the UN group's recommendation for comprehensive weekly statements from relevant government ministries on RVF status in the country, to ease public anxiety.

He also directed the Ministry of Livestock Development to look into the possibility of acquiring RVF vaccinations from Egypt, instead of depending on South Africa and Kenya only.

According to the statement, the government has so far received just 486,000 out of two million RVF vaccinations that have been ordered since the disease erupted in the country.

Also present at yesterday's meeting between the PM and UN group were the Minister of Health and Social Welfare, Prof. David Mwakyausa, and the Permanent Secretary in the Ministry of Livestock Development, Dr Charles Nyamruna.

All in all the success stories cannot be separated as such as all the organisations worked together and with the relevant ministries to achieve the best results.

Data collection on RVF

Figure 1: weekly cases of RVF from the 1st case

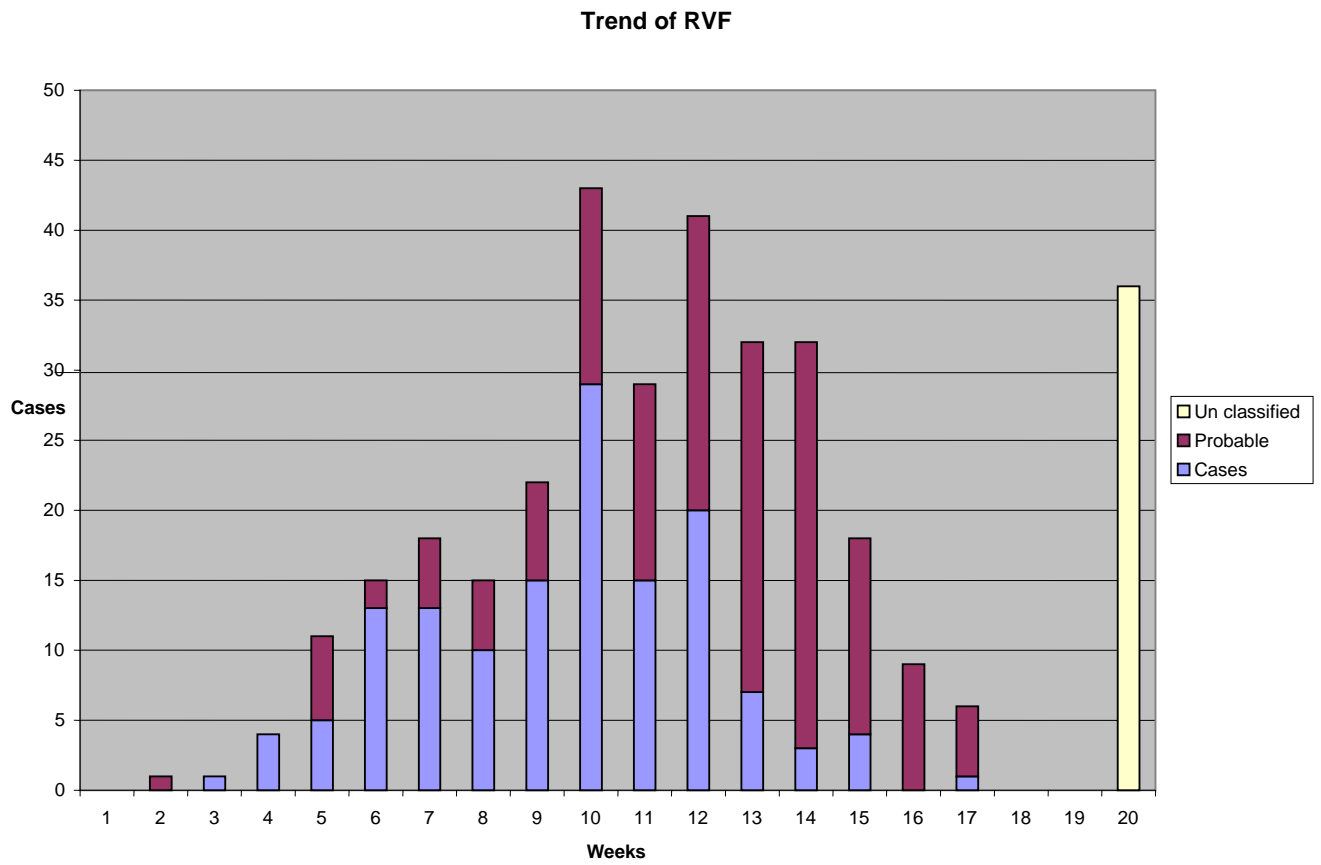


Figure 2: distribution of RVF by sex

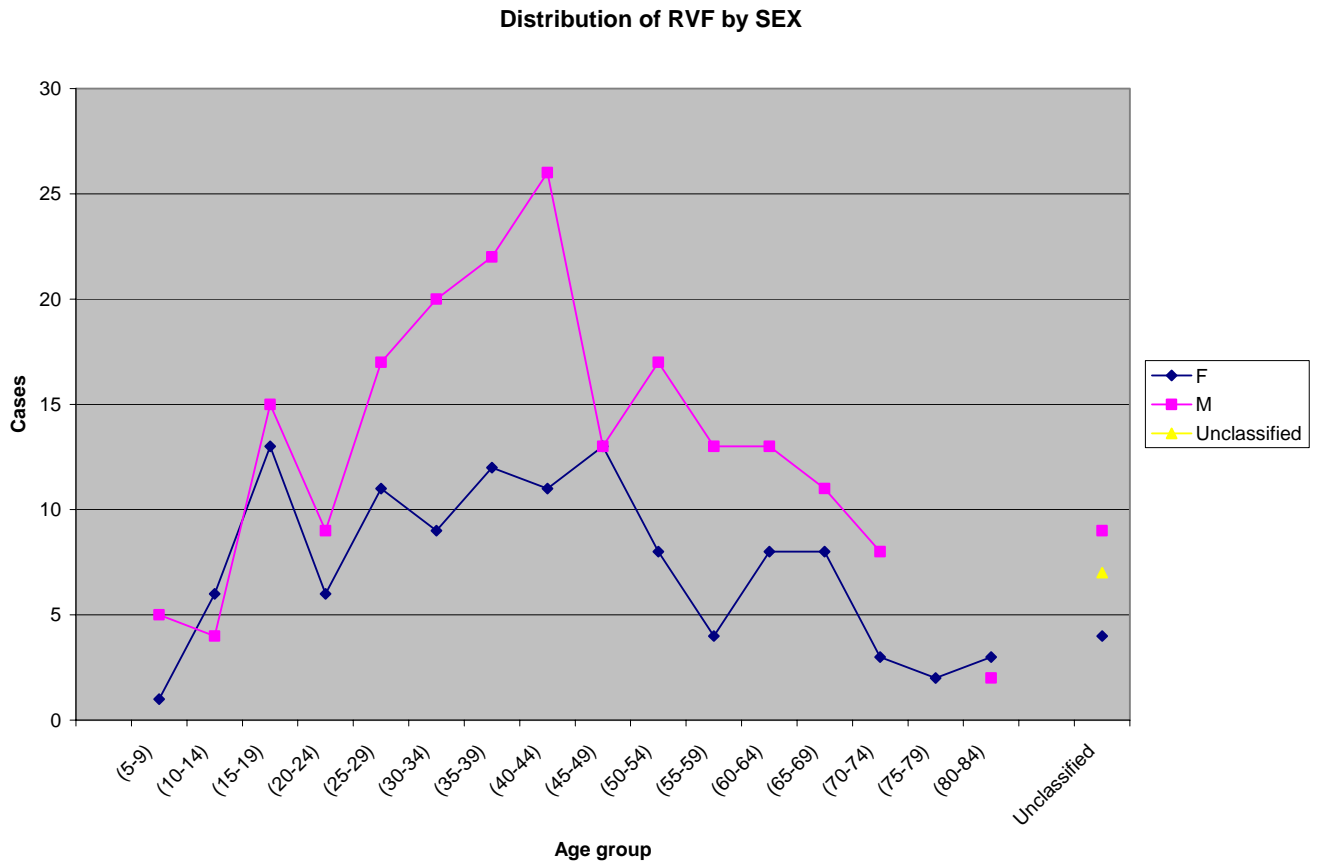


Figure 3: the spread of RVF

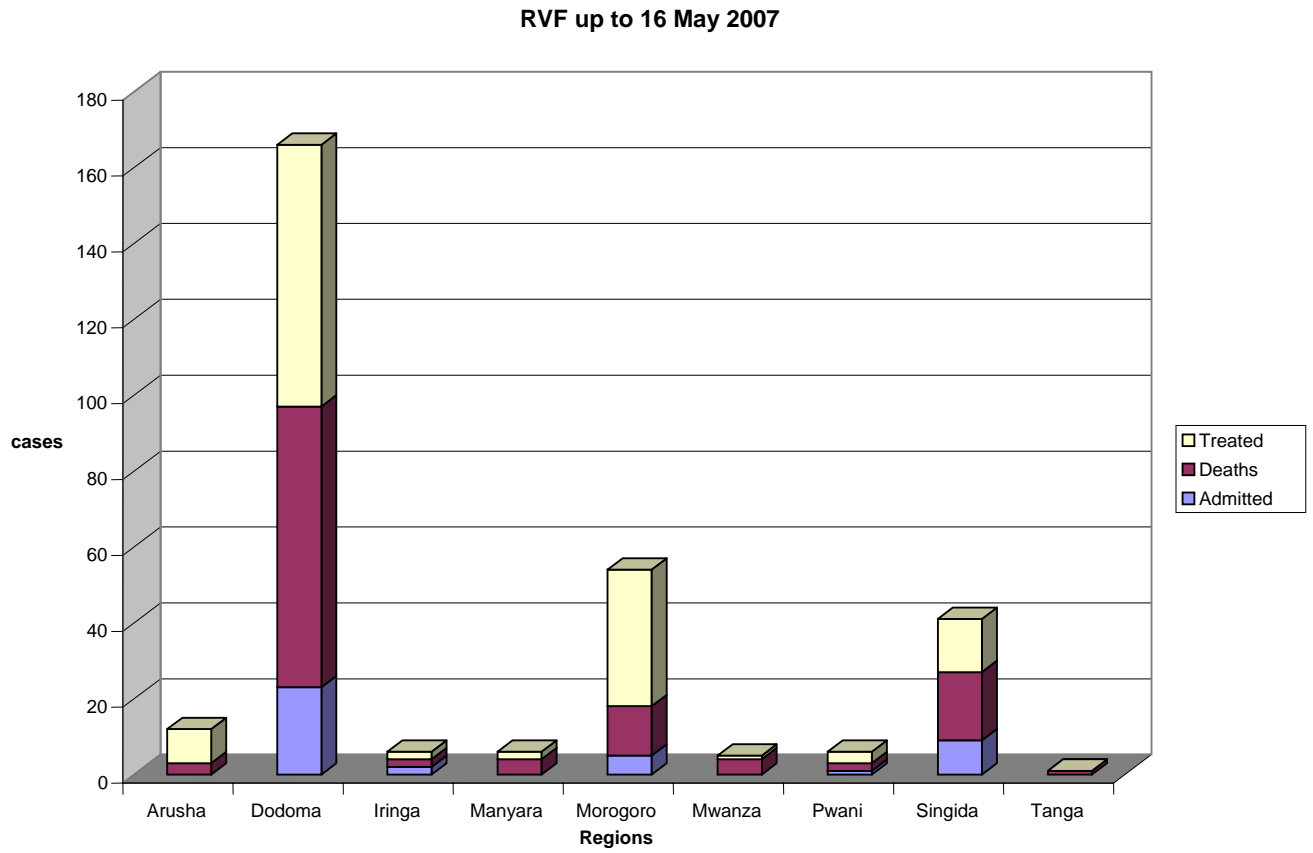


Figure 4: Spread of RVF by Region

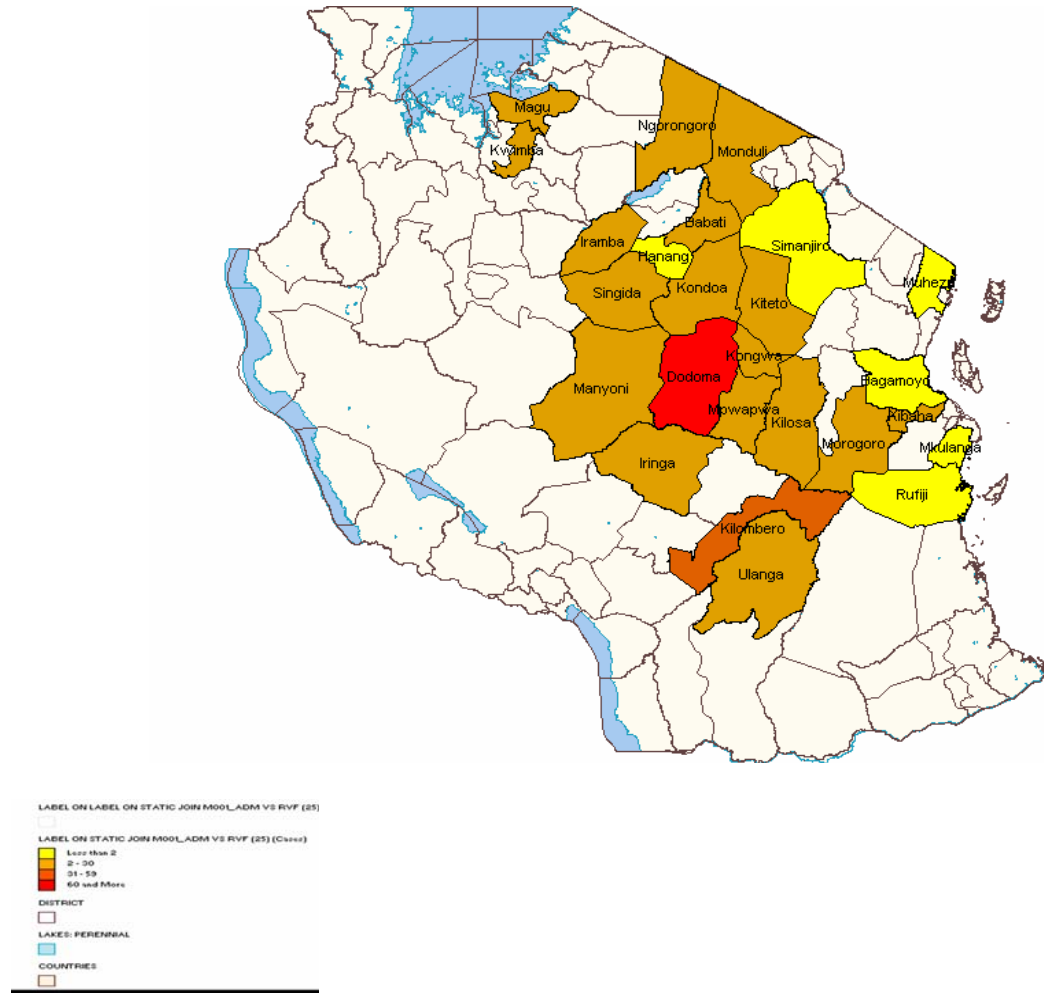
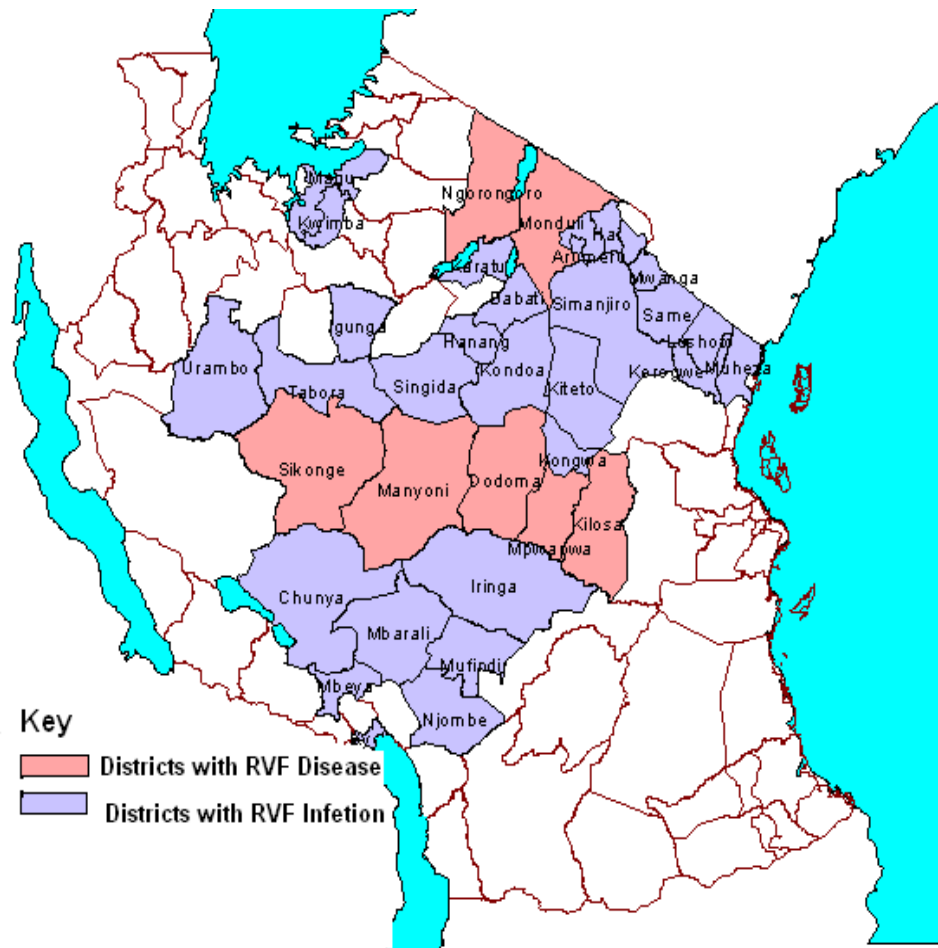


Figure 5: Outbreak and spread of disease by District (FAO)



FAO: Districts with RVF disease or RVF outbreaks (Source: MoLDF 2007)

Abbreviations and Acronyms

- AHC:	Animal Health Consultant
- BDSL:	Biological Diagnostic Supplied Limited
- DADIP:	District Agricultural Development Plans
- CDC:	Centre for Disease Control
- CVL:	Central Veterinary Laboratory
- DVS:	Director of Veterinary Services
- ECU:	Emergency Coordination Unit (FAO)
- ELISA:	Enzyme Linked Immunosorbent Assay
- FAO:	Food and Agriculture Organization of the United Nations
- IgG:	Immunoglobulin type G
- IgM:	Immunoglobulin type M
- KEMRI:	Kenya Medical Research Institute
- LDF:	Livestock Development Fund
- LTI:	Livestock Training Institutes
- LoA:	Letter of Agreement
- MoLD:	Ministry of Livestock Development
- MoHSW:	Ministry of Health and Social Welfare
- NGO:	Non Governmental Organization
- OIE:	Office for International Epizootics
- OVI:	Onderstepoort Veterinary Institute
- PCR:	Polymerase Chain Reaction
- PMO:	Prime Minister Office
- RVF:	Rift Valley Fever
- RVOs:	Regional Veterinary Officers
- TAD:	Trans-boundary Animal Diseases
- TFDA:	Tanzania Food and Drug Authority
- UNICEF:	United Nations Children's Fund
- VICs:	Veterinary Investigation Centers
- WHO:	World Health Organization
- WAHIS:	World Animal Health Information System