

REGIONAL FOOD SECURITY AND NUTRITION WORKING GROUP

Brief Report on the Impact of Rift Valley Fever in the Horn of Africa

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Background

In early 2006 the Horn of Africa (HoA) countries, and particularly Somalia, Kenya and Ethiopia, have suffered a serious drought. This shock and other attendant hardships, which mainly affected the pastoral and agro-pastoral populations in the eastern part of the HoA, made close to 10 million people extremely food insecure and heavily dependent on humanitarian assistance. The March to May rains brought temporary relief but were ineffective in bringing about any real improvement in the food security situation as the population had lost large numbers of livestock, and asset rebuilding usually takes a long time. In late 2006, a mild El-Nino phenomenon resulted in severe flooding, destroyed property and displaced large numbers of riverine and agropastoral groups, most of whom living in the areas previously affected by the drought. The persistent heavy rains and flooding created favourable conditions for mosquitoes to breed and an outbreak of the contagious Rift Valley Fever disease was reported in the districts of Garissa, Ijara and Tana River in Kenya in December 2006. Besides causing livestock and human deaths, the disease has major negative implications for trade in livestock and livestock products, and consequently for herder incomes and food. There is currently fear that the disease might spread and cause more damage before the dry spell fully sets in. This report provides a summary on the disease extent, food security implications, and possible interventions needed to reduce the impact of the Rift Valley Fever disease (RVF).

Brief description of the disease

The Rift Valley fever (RVF) is an acute, fever-causing viral disease that affects domestic animals (such as cattle, buffalo, sheep, goats, and camels) and humans. RVF is most commonly associated with unusual climatic conditions characterized by heavy and prolonged rainfall leading to abnormally high mosquito populations. RVF is generally found in regions of eastern and southern Africa where sheep and cattle are raised, but the virus also exists in most countries of sub-Saharan Africa and in Madagascar. In September 2000, a RVF outbreak was reported in Saudi Arabia and subsequently in Yemen. These cases represent the first Rift Valley fever cases identified outside Africa.

The RVF virus primarily affects livestock, and outbreaks can rapidly result in large numbers of animals exhibiting clinical disease (this situation is referred to as an "epizootic"). The presence of an RVF epizootic can lead to an epidemic among humans who are exposed to diseased animals. An epizootic of RVF is generally observed during years in which unusually heavy rainfall and localized flooding occur. Excessive and persistent rainfall allows mosquito eggs, usually of the genus *Aedes*, to hatch. The mosquito eggs are naturally infected with the RVF virus, and the resulting mosquitoes transfer the virus to the livestock on which they feed. Once the livestock is infected, other species of mosquitoes can become infected from the animals and can spread the disease. In addition, it is possible that the virus can be transmitted by other biting insects. Humans get the disease if they are exposed to the blood, body fluids, or tissues of infected animals. Direct exposure to infected animals can occur during slaughter or through veterinary and obstetric procedures. Humans also get RVF through bites from

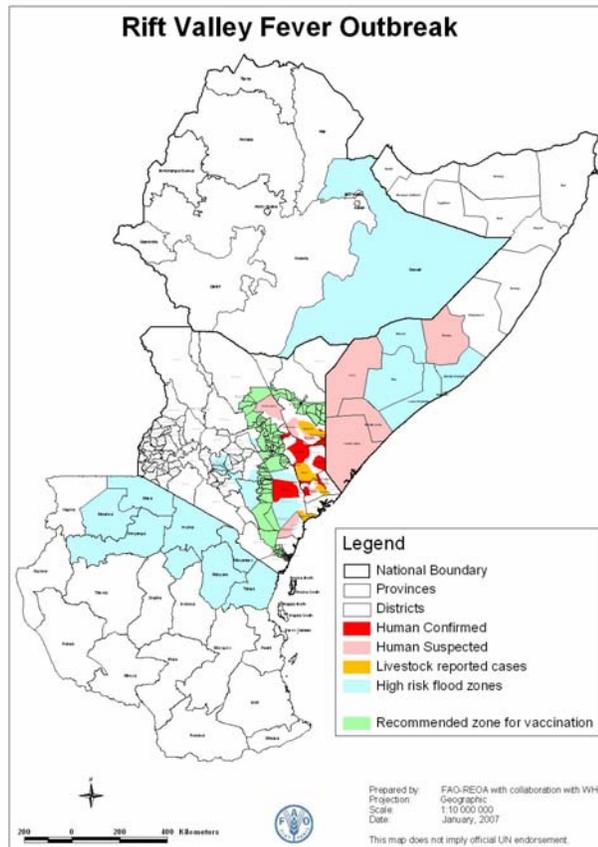
infected mosquitoes and possibly other biting insects that have virus-contaminated mouthparts.

Affected areas

Officially the incidences of Rift Valley Fever have so far been detected in Kenya in the Garissa, Ijara, Tana River, Kilifi, Malindi and Wajir districts. In these districts the disease has already caused the deaths of people and livestock and abortion of most pregnant animals. There is a high risk of the disease spreading to all the districts neighbouring the affected areas. There are already reports of suspected human cases of RVF in Juba valley districts in Somalia (WHO) and widespread livestock abortions are also reported in these areas. The attached map provides information on regions affected by RVF and those at risk.

Implications for food security

Livestock mortality and abortion – Although adult animal mortality is generally low (less than 10% of the herd), the disease causes high mortality among young animals (calves and kids) and a very high abortion rates (80-90%). This effectively reduces herd sizes and is a major set back for pastoralists and agropastoralists who had already lost livestock to the past drought and were beginning to recover during the current rains.



Loss of revenue – The occurrence of the disease has immediately resulted in a quarantine being imposed on the affected districts implying restrictions on movement and trade in livestock and livestock products. Garissa is a major livestock trading hub for herders in most of northern Kenya and southern Somalia and a freeze in trade here has far reaching implications. In the past the occurrence of RVF has prompted livestock trade bans by Gulf Arab countries, which are major importers of the Horn of Africa livestock. Such trade bans have in the past affected the entire HoA and there is fear that the ban could be tightened. Trade bans and quarantines cause serious economic hardships on pastoralists and agropastoralists whose major incomes are from livestock and livestock products. Livestock income is used to purchase cereals and other essentials, which take up the biggest portion of the pastoral expenditure budget. Although a new livestock quarantine and certification centre has been set up in Djibouti for the purpose of livestock exports, the populations in southern Somalia and Kenya are unlikely to benefit from this facility as they are very far from the port.

Human morbidity and mortality – If the disease affects humans it causes morbidity and if it develops into the hemorrhagic phase it can result in death. So far about 95 people have died in the affected districts in Kenya, some of whom could be family breadwinners.

Possible actions

The disease is best prevented following early warning signals using vaccinations of livestock. Immunized livestock will not develop parasitaemia and thus will not infect mosquitoes which could pass the disease to humans. Once the first outbreak is declared, it is difficult and expensive to control RVF. It is expected that as the dry spell sets in and the mosquito population reduces, the disease will disappear. Nevertheless, the following measures are suggested to reduce the risk of further human cases and support the livelihood of the affected populations.

1. Information to the population using FAO/WHO messages like:
 - Rift valley fever can be transmitted by direct contact with animal body fluids and by mosquitoes bites. To prevent infection people should:
 - **Avoid direct contact with animal body fluids of sick or dead animals** : Do not slaughter or manipulate carcasses and fetus without protections.
 - **Wear gloves and mask (or any other device to avoid direct contact -e.g. plastic bags-) when handling sick or dead animals** : particularly when assisting birth (fetus and placenta), slaughtering, burring dead bodies or fetus. **Wash you hands with disinfectant or soap** immediately after contact with any animal body fluid.
 - **All animal products (blood, meat and milk) should be well cooked before eating.**
 - People should protect themselves day and night against mosquitoes bite by using covering clothes, repellent, bed nets and insecticides.
 - People with fever for more than 48 hrs should seek medical advice urgently.
2. Using Early warning systems to reinforce the capacity to detect and monitor Trans-boundary animal diseases and particularly RVF.
3. RVF control and the implementation of a cohesive regional vaccination campaign against the major contagious diseases, including supportive treatment to control the emergence of other vector borne diseases. Vaccination against RVF would be most effective if carried out in regions surrounding the affected areas.
4. Enhance the technical capacity in the region (epidemiology-surveillance, reporting systems, laboratory diagnostics, emergency preparedness and contingency planning).
5. Reduce the contact with the vectors by protecting people with repellent and impregnated bed-nets. Livestock should be protected using synthetics pyrethroid insecticides in form of spray or pour-on.
6. Livelihood Support programs for pastoralist and agro-pastoralist population in affected areas, particularly those who had already lost livestock through the drought and have now been affected by the disease.