

# Health-risk management in a changing climate



Red Cross volunteers and local people clear trash in a Ho Chi Minh City neighbourhood, to suppress mosquito breeding as the rainy season approaches. (Photo: Quang Tuan/Vietnam Red Cross)

**A ground-breaking Red Cross Red Crescent project, supported by The Rockefeller Foundation, to build operational knowledge on health risks that are changing with climate is nearing completion.**

“Health-risk management in a changing climate” is a project supported by The Rockefeller Foundation and the Red Cross/Red Crescent Climate Centre and implemented by the International Federation of Red Cross and Red Crescent Societies (IFRC) – the world’s biggest humanitarian network.

Core activities such as baseline surveys, health-education materials, training in climate change and health, and contingency planning were begun in 2010 in Indonesia, Kenya, Tanzania and Vietnam.

The project links the four Red Cross National Societies at field level with experts and scientific agencies; it focuses on dengue fever in the two Asian countries and waterborne diarrheal disease in East Africa – both influenced by climate, including changing rainfall patterns.

Achievements to date include innovative training materials, major improvements in latrine coverage, the establishment of local groups working for better community health, and the development of climate-based health measures.

The diverse experience of each country has also been carefully documented to build a knowledge base, applicable worldwide, on how to address changing health-risks.



# Managing health-risk in Tanzania: partnerships bear fruit



**Red Cross volunteers and villagers engaging in a VCA gather in the shade for a women's focus group**  
(Photo: Tanzania Red Cross)

*Health-risk management* solidified cooperation between the Tanzania Red Cross National Society (TRCNS) and the country's meteorological office, which now have a joint memorandum of understanding.

The TRCNS has also gathered rainfall and temperature information from the met office and data on disease incidence from local clinics going back ten years.

Putting the two data sets together and using the health-risk baseline survey, the project team designed an innovative early-warning system for use by branches.

The new contingency plan triggers volunteer-interventions appropriate to the season, based on rainfall and historical peaks for both for malaria and diarrheal disease.

Experts from the Kenya Red Cross also visited the Tanzanian project area, in Tanga region, and provided welcome peer-to-peer learning and support during the baseline survey and VCA.

*Health-risk management* in Tanzania has now reinforced the effectiveness and timeliness of community-led health interventions.

In Ho Chi Minh City, for example, one of the most rapidly growing in Asia, the dengue fever caseload doubled in 2011 over the previous year, according to the local Vietnam Red Cross chapter involved in the project.

With more than 9,000 cases, the city became the worst affected by dengue in the country.

While the link between dengue fever and climate change is yet to be fully researched, urbanization is known to be increasing the prevalence of dengue, which is spread by *Aedes* genus mosquitoes, including its life-threatening form – dengue hemorrhagic fever.

## Seasonal worry

“There are many construction sites in progress, including reconstruction of drainage systems, which provide the conditions for mosquito breeding and are difficult for vector control,” says the Ho Chi Minh chapter's analysis of the dengue risk it faces.

Dengue is a seasonal worry in much of Vietnam. But now, says the local Red Cross, the rainy season “tends to start earlier and end later, which also challenges preventive activities.”

Vietnam recently became the first of the *Health-risk management* nations to complete all five major steps of the project, including the final endline survey whose results are being shared across the Asia-Pacific region and beyond.

## Treatment

In Ho Chi Minh City and – the other project site – Tien Giang province, most survey respondents' concerns about the effects of climate change centred on *health*.

At the endline survey in Ho Chi Minh City, the already-high proportion of people who thought dengue was affected by climate change, just over 72 per cent, had increased to nearly 80 per cent; in Tien Giang in the Mekong Delta, the proportion doubled between the two surveys to just under 86 per cent.

In both locations, the number of respondents familiar with dengue symptoms and treatment methods increased between the two surveys, as did those who said they would report cases locally and try to eradicate mosquito breeding-grounds.

The work in Vietnam also confirmed that there is much that can be done during the *dry* season, when dengue is rarer, to be prepared for the rainy peak, when mosquito breeding-grounds multiply; in its early-warning or contingency plan, the Vietnamese Red Cross separated out this pre-seasonal activity.

Another outcome is steering committees at local, district, provincial and national levels – all of which enhance cooperation amongst various actors, including the health ministry, and speed up surveillance.

**A Red Cross volunteer facilitates a communications session and uses flipcharts for a discussion on preventing dengue fever with families in Tien Giang province.**

(Photo: Tran Sy Pha/Vietnam Red Cross)



The ways climate change could be interacting with dengue fever have yet to be firmly established by scientists, but in Vietnam the project took account of expected seasonal fluctuations of climate that result in dengue peaks.

Uniquely, the programme combined knowledge of seasonality and climate variation or change with disease patterns and disaster-related diseases.

This provides an operational way forward while researchers determine the exact links between dengue, climate and other variables.

## Climate information

In Kenya, it's acknowledged that health risks are changing with climate, but there is a lack of practical experience on how these risks can be managed, especially at local level.

The Kenya Red Cross Society (KRCS) drew on its strong relationships with the Ministry of Public Health and Sanitation and the Kenya Meteorological Department to train community members to use climate information to reduce diarrheal disease.

When the baseline survey showed some people in the project locations, Gem Rae and Magina in Nyando district, lacked latrines, the project helped the KRCS and the health ministry together to expand coverage to 99 per cent.

# Health-risk management in Vietnam

---

## by numbers

**100%** Increase in the proportion of people after project interventions in Tien Gang who said they would voluntarily report new cases of dengue.

**83%** Average proportion of people in Ho Chi Minh City and Tien Gang who believe dengue could be affected by climate change.

**12,000** Number of households reached with key messages about preventing mosquito breeding.

**400** Number of volunteers whose training in dengue and climate was enabled by the project.

**40** Number of combined public-health campaigns and clean-up drives by the Vietnam Red Cross within *Health-risk management*.

(Source: Progress Report, Red Cross/Red Crescent Climate Centre, August 2012)

**A community group in Kenya studies a risk map for their village.** (Photo: Kenya Red Cross)





(Photo: Indonesian Red Cross)

The March–May 2012 rainy season was relatively heavy in Kenya, and both places were flooded.

New early-warning committees, established as a key stage of the project, received a severe-weather warning four days before the floods and organized vital work to keep drainage channels clear, repair other latrines, store food and water, and gather firewood for boiling water.

Early evaluative results from the emergency response shows that as a direct result of this project, incidence of diarrheal disease in the two communities in 2012 was less than in neighbouring areas.

The local committees established now receive weekly rainfall forecasts through an expanding partnership between the KRCS and the meteorological office. Nyando being a flood-prone area, the met office has now bought land to set up a radio station to give climate information in Luo – the local language.

In early results from ongoing *Health-risk management* work in the other two program countries:

- The Indonesian Red Cross has prepared high-grade communications materials with messages on dengue

fever and climate: banners, leaflets, calendars and manuals for training facilitators and volunteers at the project locations in Jakarta (right).



- The Indonesian health ministry has committed itself to working with the Red Cross in developing early-warning systems at the key district level.
- The Tanzania Red Cross National Society (TRCNS) has liaised with climate scientists to develop pamphlets and training manuals in Swahili.
- Early assessments in Tanzania indicated that malaria is also a priority, and volunteers have been trained on low-cost interventions for malaria and diarrheal diseases.

Endline surveys in this exciting new approach to health and climate should be finished soon – generating valuable insights as well as opportunities for policy dialogue and the mainstreaming of climate risk into Red Cross Red Crescent health programming.

Supported by

