Tackling the Problem at its Source

Clean drinking water is a cornerstone of the campaign to eliminate cholera in the Democratic Republic of the Congo. Humanitarian, medical, technical and financial organizations have teamed up as part of a program to combat the disease, backed by the Veolia Environnement Foundation.

The Democratic Republic of the Congo is one of the world's countries most affected by cholera. Between 2002 and 2006, it was top of the danger list, with 14% of reported cases and 22% of deaths caused by the disease[1]. This is a major concern and the country is taking steps to improve matters. In 2005, the Congolese Ministry of Public Health unveiled a wide-ranging research project designed to shed light on the reasons behind the recurring outbreaks in the provinces of Kasai in the west and Katanga in the south-east of the country. The goal was to come up with a new strategy to fight the disease, tailored to the local environment. A team of French and Congolese researchers began conducting epidemiological tests in an attempt to identify ways in which cholera spreads. The Veolia Environnement Foundation lent its support and financial backing to the campaign in 2007.

Epidemiological tests identified eight towns in the east of the country as sources for the spread of the disease. It emerged that nearby lakes and river systems, which provide local people with their main source of water, had become a source of infection. A connection was also made between the outbreak of epidemics in major conurbations and the movement of people, largely linked to trade in fish bought in lakeside areas.

"Against a constant backdrop of self-sustaining epidemics, •••

(1) - WHO data

••• emergency medical assistance is vital, but is not enough," explains Thierry Vandevelde, Executive Officer of the Veolia Environnement Foundation. "We need to tackle the issue at the source and promote a long-term outlook. If we are to break the deadly cycle of disease outbreaks, then we need to restore and maintain access to clean drinking water." Pursuing an effective program hinges on a multi-pronged approach to tackling the problem that includes epidemiological monitoring, patient treatment, initiatives to raise awareness of hygiene issues, appraisals and assessments of water systems, and an overhaul of water distribution and wastewater collection. The Congolese Ministry of Public Health unveiled a campaign to combat cholera in 2008 in a bid to rise to the challenge. The five-year plan provides the basis for a joint approach involving government, local authorities, medical teams and NGOs. As part of this drive, the Veolia Environnement Foundation provides technical expertise and financial aid to help rehabilitate urban water distribution networks.

The campaign got under way in the cities of Kalemie and Uvira (325,000 inhabitants). With emergency-response measures in place, NGOs and Veolia Environnement specialists began working together to draw up master plans—town-planning documents vital in putting together a solid campaign and providing tailored solutions. Franck Haaser, Emergency Director and project sponsor: "The biggest challenge in Kalemie involves providing basic access to drinking water in the most vulnerable parts of the city. The problem is more wide-ranging in Uvira: there is a need to improve water supply and wastewater services for the city as a whole. Our technical skills can help set project priorities. Now that we have a picture of the whole situation, we can start to implement more in-depth initiatives."

That is the goal of work scheduled for 2011. Veolia Environnement experts will help humanitarian organizations like Solidarités oversee pipe-laying in Kalemie, along with a project to rehabilitate water facilities in Uvira. Although these initiatives are lengthy, complex and costly to set up, they will bring real benefits. Franck Haaser: "Financial backers recognize the importance of our contribution and the quality of our work. That has made it easier to find funding." ■

A think tank to support the campaign and raise funds

The Veolia Environnement Foundation set up the Global Alliance Against Cholera (GAAC) in early 2010 in a bid to make initiatives undertaken in the Democratic Republic of the Congo echo around the world. The alliance—whose members come from both the public and private sector—has a range of objectives. Putting in place a framework to combat cholera like the one developed in Kalemie and Uvira involves coordinating and integrating the skills of everyone involved. It also means raising sufficient funding to extend the initiative to other towns in the country identified as sources of infection. Under the guidance of Dr Ibrahim Hassane Mayaki—formerly prime minister of Nigeria and currently CEO of New Partnership for Africa's Development (NEPAD)—GAAC comprises a host of experts from Africa, Europe and America involving both individual researchers and organizations in the bid to get the message across. "We have now begun talks with major financial backers and governments," explains Thierry Vandevelde. "We are trying to raise awareness of the program and convince other foundations to get involved. Despite the crisis, we have received between four and five million euros in funding for the campaign to combat the disease." The devastating effects of cholera in Zimbabwe, Cameroon, Chad, and, more recently, in Haiti, only serve to highlight the need for a joint approach that transcends borders.

"Providing solutions to improve the water supply"

KHOMDETH RATSAVONG, HYDRAULIC ENGINEER AT SADE AND VEOLIAFORCE VOLUNTEER, HELPED CONDUCT AN ASSESSMENT OF UVIRA'S WATER SUPPLY NETWORK IN JANUARY 2010.

What did your fieldwork involve?

K.R.: Before carrying out any appraisals, we first had to get an up-to-date map of the drinking-water supply system. With the help of local specialists and technicians, we identified and took stock of the existing network situation. This information was correlated with cholera data to gauge how the water supply impacted on the disease. The use of network modeling made it possible to hone in on weak points. Most pipes date back to colonial times and have been exposed to the elements by erosion. As a result, many have been weakened and are more likely to suffer from faults and damage.

What recommendations did you make to improve the network?

K.R.: We drew up solutions to regulate the water supply and put together a plan to renovate and service valves. To increase plant capacity, we looked at ways of improving flow using gravity-based solutions not dependent on energy sources. We also worked to safeguard the plant's raw water intake against pollution and risks related to rising water levels.

The people of Kalemie take water from a nearby river.
Emergency-response initiatives include setting up drinking-water fountains near contaminated water sources.
View of a treatment plant.
13 kilometers of new pipes, 1,600 cubic meters of additional tank facilities, and a twofold increase in pumping capacity and treatment should rehabilitate the city's water-supply network.