

BioVision Malaria Project Report



Integrated steps in the fight against malaria

Every year around two million people worldwide die of malaria – the majority in sub-Saharan Africa. And the disease is spreading farther. The scale of the problem is unfathomable, but we can not simply stand by, since

malaria is one of the greatest obstacles to Africa's development. The projects of the BioVision Foundation demonstrate the importance of integrated action in the fight against malaria.

BioVision-Project Nyabondo: mosquitoes cut by 90%

Nyabondo is a community in Western Kenya near to Lake Victoria. The heavy clay soil is ideal for brick production, which provides a living for many of the 35,000 people who live there. The brick makers, as they are called, cut clay to make bricks - hard work, but a good source of income.

But the brick making also has its downside: where the earth has been lifted out, thousands of small pools are left behind and form ideal breeding sites for mosquitoes. Previous years saw many serious outbreaks of malaria. Every year between 7000 and 8000 cases of the disease are registered at local hospitals. For pregnant women and small children, especially, malaria is life threatening.

For years, scientists from ICIPE (International Insect Research Centre) have been investigating the correlation between brick making and malaria. This research is supported by BioVision and SDC (Swiss Development Corporation). Now the knowledge acquired has led to a large-scale field campaign.

Adopting an integrated approach, BioVision uses different methods to fight malaria at the same time. First the people learn how dangerous the many stagnant pools are. When possible, the pools are drained off by building a network of trenches. Second, where drainage is not possible, the water is treated with the environmentally friendly insecticide Bti *) (Bacillus thuringiensis israelensis) to kill the malaria mosquitoes in their breeding habitats. Third, the inhabitants of Nyabondo receive treated mosquito nets to protect themselves from infectious bites. In 2005, the population was supplied with 13,000 nets, which should already allow for 50% coverage. BioVision continues to work closely with local authorities and the population to promote awareness of the water-related malaria problem within the brick making community.

This project has scientific back-up to document very precisely the efficiency of the methods. This much is already clear: the integrated approach has borne fruit quickly. After one year, the number of mosquitoes has already dropped by 90%. Cases of malaria have dropped by about half!



BioVision Project Team using Bti to control mosquito larvae in breeding sites in Nyabondo

BioVision-Project Malindi: Tackling the causes of malaria at the root

Malindi is a town on the coast of the Indian Ocean, about 100km north of Mombasa. Many of its 85,000 inhabitants benefit from its attractive location, since tourism is the most important source of income. However, the attractive location also has its downside. Many swimming pools are used extensively during the tourist season, but lie empty during the low season. They then collect rainwater and offer ideal living conditions for mosquitoes. During the rainy season, innumerable puddles also form everywhere within the densely populated town, offering further breeding sites for the malaria-transmitting mosquitoes. Malaria is one of the greatest health problems in Malindi: every third patient in the local hospital suffers from malaria.

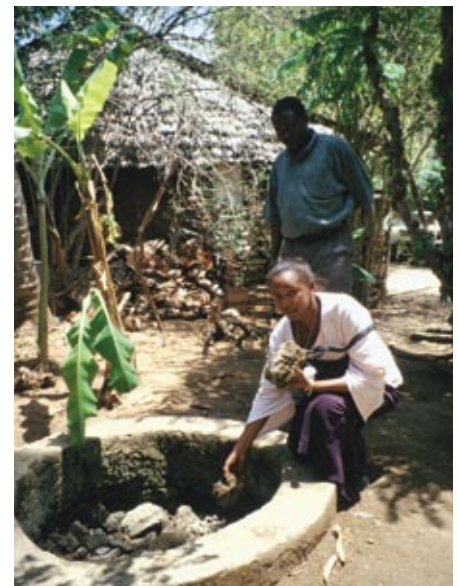
BioVision is also fighting malaria with an integrated approach in Malindi. What is important is that the people become aware of the dangers these stagnant bodies of water present. To this end BioVision works closely with the KEMRI Institute (Kenya Medical Research Institute). In addition, the local authorities are also involved in the Malindi project. Cooperation with the population makes it possible to track down and treat the breeding sites. Swimming pools not in use are systematically emptied and ponds are dried out. The breeding sites are treated with Bti *). The goal here is also to reduce the number of mosquitoes by at least 90%.

All available prevention methods, including distribution of Insecticide Treated Nets, should lead to long-term protection of people from malaria infection.

**) Mosquitoes are controlled worldwide with Bti, especially in the USA and Europe. Bti is a naturally occurring soil bacterium which produces a protein with insecticidal properties. When a mosquito larva ingests Bti the intestine ruptures, killing the larva. In this way the water-borne mosquito stages are destroyed while other organisms and the environment remain unharmed.*



BioVision Project Team counting the number of larvae in a rainwater sample from an unused swimming pool in Malindi



Informing the local population and eliminating breeding sites



Vector control through instruction in drainage and the use of larvicide



Distribution and instruction on the use of Insecticide Treated Nets

The BioVision projects are made possible only through many generous donations. We thank you for your support!



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BioVision is an independent Swiss foundation with a global mandate to alleviate poverty and disease and improve the livelihoods of people living in extreme poverty, while maintaining the precious natural resources that sustain life. Its activities in Africa concentrate on improving human, animal, plant and environmental health - with a special focus on women and youth - through the dissemination of appropriate development methods and capacity building at the community level. BioVision's mission is to "Think and Act Ecologically".



FAWCO, a UN recognized NGO with ECOSOC and the largest association of private sector Americans abroad, supports BioVision's integrated approach to malaria prevention. Contact networks@fawco.org, www.fawco.org.