



Private Sector Malaria Control Activities in Africa

AFM researched private sector malaria control activities in Africa and summarized the information below based on information garnered through websites and public documents published by the relevant companies. Malaria poses significant challenges to companies in Africa. Episodes of malaria can result in absenteeism, reduced productivity and even death – all of which affect a company's bottom line. The companies reviewed below have recognized the potential malaria threat at their various sites of operation by investing in malaria control interventions. Many have successfully brought the disease under control. Companies that have invested in IRS programs are listed first, followed by companies that have made other important investments in malaria control. This list should not be seen as exhaustive and AFM welcomes any feedback from companies that are active in malaria control.

Private Companies Active in Indoor Residual Spraying



Malaria accounts for 49% of all hospital cases and 22% of all deaths in Obuasi, Ghana. In 2005, the Obuasi municipal area had an estimated average of 11,000 malaria cases per month according to the local Obuasi health authority, with an additional 6,800 of these cases receiving treatment at Obuasi Mine's Edwin Cade Memorial Hospital. Of the cases reported at Edwin Cade, 2,400 were employees or contractors and the balance (4,400) were dependants of the gold mine. In January 2006, AngloGold Ashanti implemented an integrated malaria control programme focusing on vector control, effective disease management, surveillance, monitoring, and a comprehensive information, education and communication strategy. The first round of indoor residual spraying (IRS) was completed in April 2006 and included mine community infrastructure and surrounding villages. A total of 134,000 structures were sprayed and of these, approximately 27,000 were dwellings. The second round of spraying started in September. By November, AngloGold Ashanti achieved a 50% reduction in malaria cases seen at the Edwin Cade Memorial Hospital.



BHP Billiton is a major shareholder of Mozal, the Mozambican Aluminium Smelter (important activities in malaria control are described in more detail below). Aside from Mozal, BHP Billiton contributes to malaria control through its involvement in Corridor Sands. Corridor Sands donated \$390,000 to finance an initiative to combat malaria in Mozambique. The two year project is intended to reduce the incidence of malaria in Chibuto by 20%. In 2005, there were 95,000 notified cases of malaria in the district, rising to 97,000 cases in 2006. Taking Gaza province as a whole, there were over 920,000 registered cases of malaria in 2006, resulting in the known deaths of 477 people. Under the project, IRS will be carried out, materials will be provided for rapid diagnosis of disease and health staff will be trained in how to manage malaria cases.



Illovo Sugar Limited has operations in South Africa, Malawi, Zambia, Swaziland, Tanzania and Mozambique. A very effective integrated malaria control strategy is followed to control malaria. IRS and larvaciding of mosquito breeding sites spearheads Illovo's malaria vector control efforts. Awareness programs to educate staff and the use of personal protection measures, such as chemoprophylaxis and repellents, are encouraged by the clinics at each mill to prevent malaria infection. Illovo treats all malaria cases promptly with an effective drug to reduce the malaria reservoir.



Tongaat Hulett Sugar has operations in South Africa, Mozambique, Swaziland and Zimbabwe. Malaria remains a significant health risk in Mozambique, Swaziland and Zimbabwe. The total number of recorded malaria cases in 2007 was 1,003, with 751 cases reported in Mozambique, 1 in Swaziland and 251 in Zimbabwe. Integrated malaria control programs to mitigate the impact of the disease are in place at the respective operating centers. The key elements of the programs are vector control with insecticides (IRS), prevention of mosquito bites with personal protective measures and treatment of established cases of malaria.

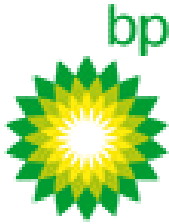
Konkola Copper Mines Plc

Konkola Copper Mines (KCM) is the largest mining and metals company in Zambia. KCM's malaria control program covered an area of 834km² in 2001 and 2002, which encompassed a 10km radius around the council-delineated towns of Chingola, Chililabombwe and Nampundwe. In 2003 and 2004, the malaria control area was increased to 842km² with the inclusion of KCM employee residences in Kitwe and Kalulushi.

Parasite prevalence in the three towns targeted for IRS and larval control has declined dramatically since the program began in 2000. Overall parasite prevalence declined by approximately 90% in Chingola from 65 per 1,000 to 6 per 1,000, and by 79% in Chililabombwe from 136 per 1,000 to 28 per 1,000. Parasite prevalence in Chingola, Chililabombwe and Nampundwe fell from 89 per 1,000 to 17 per 1,000. Malaria mortality has fallen along with the total caseload. Malaria mortality per 1,000 population based on data collected from KCM clinics dropped from a high of 40 and 23 in Chililabombwe and Chingola respectively to zero in both towns.



The Mozal project is the largest industrial project ever undertaken in Mozambique and was established in 2000. It is a partnership between BHP Billiton (47%), the Mitsubishi Corporation (25%), the Industrial Development Corporation (24%) and the Mozambican Government (4%). During the construction phase of Mozal, one in three employees contracted malaria (6,600 cases) within the first two years of operation. Of these cases 3,300 were expatriate employees who had to be evacuated by road or air. Malaria imposed significant costs to the Mozal developers and the direct and indirect costs are estimated at US\$2.73 million. The average malaria parasite prevalence rate in the Mozal area in 2000 was 86%. After the first spray round the malaria prevalence decreased to 62% in 2001, 36% in 2002 and 18% in 2003. The current malaria parasite prevalence is below 15%, with reported malaria cases amongst employees having decreased by 50%.



BP has joined forces with Konkola Mines in Zambia to eradicate malaria in five mining towns in the country's Copperbelt using a range of interventions. IRS has been conducted and insecticide-treated bed nets (ITNs) have been distributed to vulnerable groups, including people in clinics and children in orphanages. Alongside these practical preventative measures, people living in local communities are also being taught how to maintain clean, mosquito-free living environments. Grass is being cut and storm water drains cleared to reduce potential breeding grounds. The project's budget was \$560,000 over two years, of which BP contributed \$60,000.



Beginning in late 2005, Lafarge initiated comprehensive anti-malaria programs that include prevention and treatment in seven African countries. These are Kenya, Uganda, Malawi, Zambia, Benin, Nigeria, Tanzania, Cameroon, and Zimbabwe. Lafarge has developed a road map for its work that is based on the company's experience with HIV/AIDS. The company developed a Malaria Toolbox, which includes prevention through an awareness program, distribution of ITNs, intermittent preventative treatment of pregnant women and IRS. Treatment is provided with Artemisinin Combination Therapies (ACTs) following microscopic diagnosis and rapid tests.



Marathon Oil has invested considerably in reducing malaria transmission on Bioko Island in East Guinea by partnering with the Ministry of Health on a six-year malaria control project. The Bioko Island Malaria Control Project includes IRS with bendiocarb, case management using ACTs that are prepackaged and color-coded by age and weight of the patient, and a state-of-the-art program surveillance system. Results achieved by the project to date include: a) IRS coverage of 87%; b) introduction of ACT in all facilities providing malaria treatment; c) intermittent presumptive treatment for pregnant women in all facilities providing prenatal care; d) improved diagnostic capacity in all facilities by introducing rapid diagnostic tests and strengthening laboratories; e) significant reduction

in parasitemia levels based on household surveys at sentinel sites; f) significant increase in hemoglobin concentration; g) reduction of the entomological inoculation rates to approximately 25% of pre-spraying levels after the 1st round of IRS.

Other Private Malaria Control Initiatives



Anglo American plc has contributed greatly to malaria control both directly and indirectly. Through Anglo American's erstwhile and existing shareholding of several mines, such as Konkola Copper Mines and AngloGold, the company has put in place excellent malaria control programs. Furthermore through organizations such as the Global Fund to Fight HIV/AIDS, TB and Malaria and the Global Business Coalition, Anglo American has provided outstanding global leadership for effective malaria control.



In 2006, the Exxon Mobil Foundation worked in partnership with the Health Store Foundation to distribute new anti-malarial medicines to underserved populations through an existing franchise of child and family wellness clinics and shop outlets in Kenya. It devoted \$9 million to support awareness of, and access to, malaria treatment and prevention options; to promote strategies to build health care capacity at the community level; to fund research and development of new drugs and vaccines; and to improve international advocacy initiatives. The Foundation further announced a grant of \$1 million in 2007 to support the efforts of the Ministry of Health in Angola to strengthen and extend malaria prevention and control in that country.



Chevron Corp has several programs in place to fight malaria in areas of Africa where the disease is a major health threat to the company's employees, their families and the communities in which they live. Anti-malarial programs targeting both prevention and treatment have been strengthened and communication efforts have been enhanced in

Angola and Nigeria. Chevron Corp, operating in Angola, has been sending nurses out to homes of employees whose families frequently visit clinics seeking treatment for malaria. They offer advice on how to eliminate mosquito breeding grounds, apply screens and use ITNs.



In 2006, Deutsche Post World Net helped distribute approximately 3.5 million ITNs to children under five in Kenya. Its employees acting as individuals also supported UNICEF's mission in Kenya with additional in-kind and financial contributions. Monies raised will be used to purchase additional ITNs for children, as well as to fund health and education projects.



GlaxoSmithKline (GSK) has provided vaccines to public sector healthcare programs in developing countries at preferential prices for over 20 years. It has also provided anti-malarial medicines to public health programs in over 60 developing countries at preferential, not-for-profit prices. The African Malaria Partnership is part of GSK's global charitable program focusing on health and education in under-served communities around the world. Established in 2001, this initiative supports effective community-focused responses to improve the prevention and treatment of malaria in sub-Saharan Africa. Since its inception, it has worked in partnership with a number of not-for-profit organizations in eight African countries to implement behavior change programs and improve the prevention and treatment of malaria in vulnerable communities totalling over 2 million people. In November 2005, the program was extended to support a new advocacy initiative — Mobilizing for Malaria — in partnership with the Malaria Consortium.



Novartis developed the first and to date the only internationally quality assured fixed-dose ACT to treat malaria, Coartem. In 2001, it entered an agreement with the World Health Organisation to provide Coartem to public sector healthcare programs in malaria endemic countries at not-for-profit prices. In September 2006, Novartis reduced the average price of Coartem by more than one-third to an average of one dollar per treatment in an effort to accelerate access to malaria therapy in low-income regions, particularly Africa. Novartis remains a global leader in the development of malaria therapies and in assisting countries to improve access to safe and effective medicines.



As part of a five year pilot project with an estimated \$3 million budget, Pfizer is working with its country offices and on-the-ground partners to increase the percentage of patients who seek proper malaria care and enhance the capacity of the informal sector to serve as a vehicle for the effective delivery of anti-malarial medicine.



The Shell Petroleum Company of Nigeria Limited and Africare announced the signing of a partnership agreement to establish a \$4.5 million health care program in Nigeria. Shell will contribute \$3.4 million of the program's cost over the next three years, with Africare contributing \$1.1 million. Shell and Africare will concentrate on the six core Niger Delta states. The partners will distribute ITNs, develop local capacity to manufacture and impregnate nets, and create business opportunities for small and medium scale enterprises.



Sumitomo Chemical has committed over 330,000 Olyset long-lasting ITNs worth approximately \$2 million to the Millennium Villages project in Africa. These nets will help protect around half a million people against the threat of malaria.



The US Government, Virgin Unite, Anglo Coal and the Ndlovu Medical Centre have joined forces in a public-private partnership to build a community health centre adjacent to the Sabi Sands Game Reserve. Through this co-investment scheme, partners are pouring a collective R50 million into creating a 'one-stop health care centre' that will bring free treatment to the community for HIV/AIDS, tuberculosis and malaria.



Sanofi Aventis has a long history and expertise in developing malaria treatments. In 2007, Sanofi Aventis launched ASAQ, a fixed dose artemesinin-based combination therapy, which was developed in collaboration with the Drugs for Neglected Diseases initiative. ASAQ combines artesunate and amodiaquine and Sanofi-Aventis is committed to providing the medicine at cost to malaria affected countries.