

Global Health Initiative

Public-Private Partnership Case Example

Creating a public-private
partnership to build local malaria
intervention capability in
Mozambique, Swaziland, and
South Africa

Case categories

Organizations: **BHP Billiton, The Business Trust, GFATM, Medical Research Council, Regional Malaria Control Commission, University of Cape Town**

Partnership Type: **Malaria Control Capacity Building**

Location: **Mozambique, South Africa, Swaziland** Programme: **Malaria**

Key questions

- What are the key success factors that enable a public-private partnership to build local malaria intervention capacity across multiple countries?
- How can the private sector extend impact beyond its employees to a broader community?
- What unique skills can the private sector bring to bear in a partnership with the public sector?

Private Sector Intervention Case Example

Company: BHP Billiton

Industry: Mining and Metals

Location: Southern Africa

Programme: Malaria

Overview

BHP Billiton is the world's largest diversified resource company with 37,000 employees working in more than 25 countries and approximately \$30 billion in revenues.¹ The workforce includes approximately 17,000 employees in Mozambique and South Africa.²

In 1999 malaria was one of BHP Billiton's most formidable enemies, threatening the long-term viability and expansion plans of the Mozal smelter, a \$2 billion investment in Maputo, Mozambique.³ BHP Billiton's commitment to sustainable economic development and its need to address the long-term economics of the plant led to the company to join the Lubombo Spatial Development Initiative (LSDI) in 2000.

LSDI is an innovative cross-border public-private sector partnership focused on reducing the malaria burden in Lubombo, an area spanning three adjoining countries: South Africa, Swaziland, and Mozambique. The goal of the partnership is to improve the health and economic viability of the Lubombo region. The LSDI aims to achieve this goal by supporting regional indoor residual spraying (IRS) of insecticides and ensuring early effective treatment of malaria cases by implementing rapid diagnostic malaria tests (RDTs), and highly effective Artemisinin-based combination therapy (ACT).⁴ WHO recommends ACTs as first-line treatment for malaria in countries experiencing resistance to conventional therapies.

The LSDI includes multiple public and private sector partners including: BHP Billiton; The Business Trust; The South African Medical Research Council; South Africa, Mozambique, and Swaziland Ministries of Health; and the University of Cape Town, among others.

The partnership has enjoyed phenomenal success. To date, the LSDI has completed spraying in a region that spans 100,000 square kilometers of contiguous control area, resulting in the protection of approximately 4.7 million people. Spraying and effective treatment efforts have resulted in reducing malaria incidence by nearly 80 percent across the region.⁵

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Business Case

Vision

“For us, the role of business is more than charity and a bottom line; it is to be a catalyst for economic development through real action and a sustainable development agenda. The objectives of the LSDI are about more than just malaria control – by addressing malaria, we are removing a key obstacle to human and economic development in the region.”

– Andre van der Bergh, Regional Advisor, Southern Africa Health, Safety, Environment and Communities, BHP Billiton

Case for Action

At the time of the construction of the Mozal smelter, Mozambique had recently emerged from 17 years of civil war that had devastated the economy and constrained malaria control efforts. The nation suffered over three million malaria infections annually and approximately 35 percent of all deaths in children under five were caused by the disease.⁶

Mozambique’s malaria-control was severely limited in the southern part of the country due to substantial human resource and financial constraints. As such, data on the extent of the malaria problem around Mozal was limited. It was not until BHP Billiton began construction of the smelter that the scale of the malaria crisis in the region and the impact on business became apparent.

A baseline malaria survey conducted in southern Mozambique in December of 1999 showed that infection rates among children in the area surrounding the Mozal plant exceeded 85 percent.⁷ Malaria plagued the construction of the new plant as evidenced by the nearly \$2.7 million in malaria costs incurred during its construction, a figure that includes productivity losses through absenteeism and sickness, and medical costs.⁸ BHP Billiton reported 6,000 recorded cases of malaria, 300 medical evacuations, and 13 fatalities during a construction period of approximately two years. BHP Billiton’s ability to attract and retain expatriate employees with specific areas of expertise in this environment was also at risk.

Phase one of the Mozal construction was completed in June of 2000. By 2001, the smelter accounted for 55 percent of Mozambique’s exports, 20 percent of imports, and almost a third of the country’s 15 percent economic growth.⁹

BHP Billiton’s desire to ensure the long-term sustainability of the plant, and its commitment to sustainable economic development, prompted the company to join the LSDI in 2000.

Goals and Outcomes

The LSDI was created with the broad goal of improving the health of communities while fostering development of the regional economy, in particular, local tourism. Specific objectives include:¹⁰

- Extend Indoor Residual Spraying (IRS) to Mozambique, and ensure that effective malaria control continues in South Africa and Swaziland
- Once IRS is established, ensure early effective malaria treatment through implementing RDTs and ACTs
- Monitor and evaluate malaria control in the region by developing a regional computer based tracking system
- Provide updated tourist information booklets containing definitive malaria risk maps and prophylaxis guidelines
- Monitor the negative impact of malaria and the beneficial effects of malaria control on communities, tourism, and development
- Ensure the sustainability of malaria control in Mozambique through appropriate capacity development, fundraising, and integration of control activities within the provincial health system

Goals and Outcomes (continued...)

For the LSDI partners, it is of key strategic importance to have a defined set of metrics to evaluate outcomes and progress against LSDI objectives. For example, demonstrated health outcomes have enabled the Medical Research Council, responsible for LSDI implementation, to secure additional funding from the Global Fund to Fight AIDS, TB, and Malaria (GFATM).

The ability to quantify impact has also helped to ensure BHP Billiton's continued support. The initiative has made significant progress in the local community in which BHP Billiton operates. Within three years after the start of IRS in Maputo Province, malaria infections have been reduced from 625 per 1000 population to less than 200 per 1000.¹¹ Reductions in malaria have translated into fewer recorded cases, medical evacuations, and fatalities at the Mozal smelter.¹²

- Recorded cases: 6,000 vs. 1,064
- Medical evacuations: 300 vs. 53
- Fatalities: 13 vs. 1

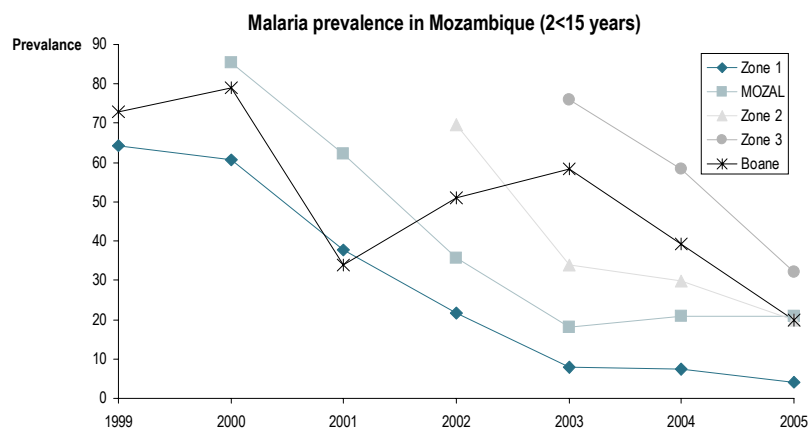
"It is critical that we are able to measure the impact (of LSDI activities). We have worked hard to ensure that we have the proper methodologies in place... it has been essential to building government support but also to ensure engagement with a results-based private sector."

- Dr. Brian Sharp, Director of the South African Medical Research Council and Principal Investigator of the LSDI

The LSDI, now in its fifth year of operation, has proved very successful against the goals it set out to achieve. Specific outcomes include:¹³

- Increased local capacity in Mozambique to implement spraying programmes, and to ensure effective malaria diagnosis and treatment with ACTs (full ACT roll-out scheduled to be completed in 2006).
- Significant malaria prevalence and incidence reduction in the Lubombo region, including: a nearly 80 percent reduction in malaria prevalence in Mozambique over five years (see Figure 1); an incidence decrease of 91 percent over three years in Swaziland; and incidence reductions in the range of 60-90 percent over four years in South Africa.
- An increase in business development, mainly in tourism, as measured by the creation of approximately 1000 jobs.¹⁴

Figure 1: Malaria Reductions in Mozambique



Note: LSDI program inaugurated in 1999, BHP Billiton joined in 2000
 Source: Malaria Research Council

Private Sector Intervention Case Example

Company: BHP Billiton

Industry: Mining and Metals

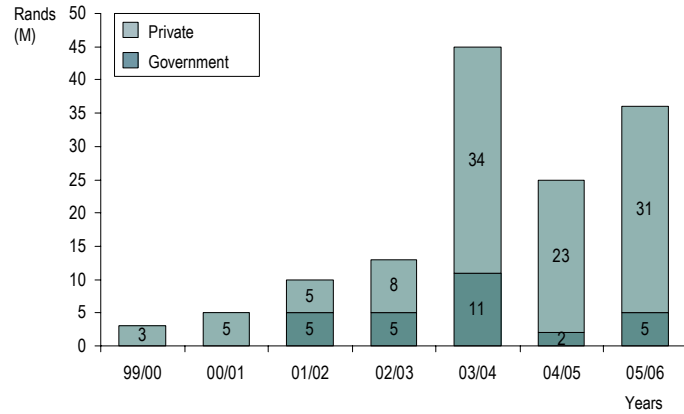
Location: Southern Africa

Programme: Malaria

Financing

For the first two years, financing for the LSDI came entirely from private sector sources. BHP Billiton and The Business Trust were founding contributors and have continued support. The initiative's demonstrated success has resulted in additional government financing and, in 2003, a five year \$22M grant from GFATM.¹⁵

Figure 2: Funding for the LSDI Project



Source: Adapted from the Medical Research Council

LSDI Programme Description

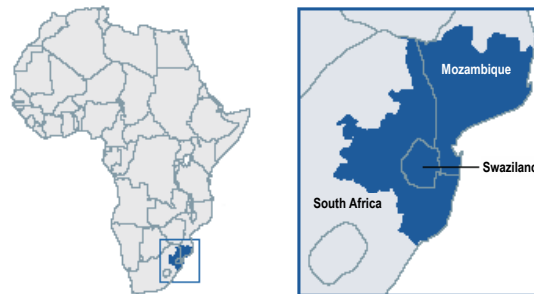
Policy

“Our commitment to a core principle of ‘Zero Harm’ enhances our license to operate, discover and add value to resources. Proving the concept of responsible mining generates goodwill which has translated into significant stakeholder value.”
 – Andre van der Bergh, Regional Advisor, Southern Africa Health, Safety, Environment, and Communities, BHP Billiton

LSDI Programme

In 1999 Mozambique did not have a spraying programme in place on the southern border of the country outside of Maputo City. Swaziland and South Africa, despite their own malaria control efforts, had unacceptably high levels of malaria in areas bordering Mozambique. Cross-border spread of the disease is believed to be a contributing factor to the persistence of malaria in border regions.¹⁶

Figure 3: Lubombo Region



Source: Results profile: Lubombo Region, Rolling Back Malaria in Southern Africa, Friends of the Global Fight Against AIDS, TB, and Malaria, 2005

The LSDI initiative was launched in October of 1999 in the Lubombo region (see Figure 3) as coordinated participation was deemed to be critical in ensuring lasting impact. In particular, LSDI partner collaboration was expected to facilitate the following:¹⁷

- Shared resources/expertise and local solutions for local problems
- Regional fund-raising
- Standardized malaria control measures across national boundaries
- Coordinated monitoring, evaluation, and planning

The Partners and their Roles

LSDI’s success, in large part, is due to the unique and complementary capabilities that its public and private partners bring to the initiative.

“All of our partners are incredibly important. As co-chair of our regional coordination efforts, Andre van der Bergh of BHP Billiton has been instrumental in facilitating sound decision-making by lending his business expertise where relevant, and more generally as an advocate for our efforts... The Business Trust has also helped significantly with local and global advocacy for the partnership.”

- Karen Barnes, Associate Professor, Division of Clinical Pharmacology, University of Cape Town

Specific partners and contributions include:

- BHP Billiton brings core business capabilities to the partnership including; robust financial controls and oversight, metrics to track performance, financial support, and global and local advocacy. Andre van der Bergh is an acting co-chair of the initiative and attends quarterly meetings with other LSDI members.

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The Partners and their Roles (continued...)

- The Business Trust – an organization that strives to put the economy “on a growth path that will bring sustained improvements to the lives of all South Africans”¹⁸ – provided critical initial funding to the LSDI in order to help foster tourism growth.
- GFATM provided financial support in the form of a five year \$22 million grant in 2003 to build on LSDI’s initial success. GFATM has also provided complementary funding to further support malaria control nationally in Mozambique and Swaziland.
- The idea for the creation of the LSDI came from Brian Sharp, The Director of The Medical Research Council’s Malaria Research Lead Programme. The Council currently acts as the Principle Recipient for GFATM funds. It also provides scientific design, monitoring, and evaluation for the LSDI and act as the LSDI’s financial custodian, ensuring proper fund disbursement to each country, fund tracking, and impact measurement.
- The Regional Malaria Control Commission (RMCC) provides technical management and oversight for training as well as IRS, RDT, and ACT deployment across the three countries, working in close collaboration with each country’s Ministry of Health (MOH). The group is comprised of MOH malaria programme managers, public health specialists, and scientists from the three countries.¹⁹ The Ministries and Departments of Health, along with the RMCC, ensure that local capacity building takes place and that all initiatives have local ownership within the official public health channels.

The University of Cape Town, Division of Clinical Pharmacology, in partnership with the MOH Malaria Control Programmes, has guided the design and implementation of the rollout of ACTs. Also critical, they have ensured effective measurement of treatment outcomes across the region.

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Expanding Scope of BHP Billiton's Engagement

LSDI Programme Description (continued...)

For BHP Billiton, being an effective partner required the company to step beyond its traditional spheres of influence – employees and local community – to support broader community intervention.

BHP Billiton operates under documented Health, Safety, Environment, and Community management standards (HSEC) meant to ensure health programmes for employees and their families. In addition to its care of Mozal employees, BHP Billiton supports multiple health interventions in the community directly surrounding the Mozal plant through its Mozal Community Development Trust (MCDT), for example:²⁰

- Insecticide spraying within a ten-kilometer radius of the smelter conducted by the LSDI
- Sponsoring members of the community to attend training courses in manufacturing treated mosquito nets (MCDT provided the sewing machines, insecticides, and netting)
- Supporting films and youth theater performances on malaria awareness and prevention
- Supplementing stocks of malaria treatment drugs through support programmes
- Conducting various non-malaria projects such as HIV/AIDS programmes; establishing a public health clinic; environmental management programmes, and education projects such as building a school

“The company realized that something had to be done and it had to be done on a regional basis (beyond the Mozal community)... but we grappled with where the boundary of responsibility lay – government or corporate. We acknowledged that the control of malaria was not BHP Billiton’s core business but realized that we needed an integrated approach. Malaria doesn’t recognize boundaries and we had to address a broader geographic malaria agenda to ensure a sustainable future for our operations”

- Carlos Mesquita, General Manager Mozal

BHP Billiton’s eventual decision to join the LSDI initiative was, in part, due to the acknowledgement that long-term success controlling malaria was critical to the smelter’s sustainability and would require extending efforts beyond the local Mozal community. BHP Billiton’s successful participation in broader malaria control engagement stems from their effective practices along a number of key dimensions detailed in Section IV.

Programme Evaluation

Key Success Factors

BHP Billiton’s success in malaria engagement is due, in part, to a group of best practices as evidenced in Figure 4.

Figure 4: Key Success Factors and BHP Billiton’s Best Practice

Key success factors for engagement	BHP Billiton’s best practice
Define how company will benefit	Quantified malaria costs to plant operations
Define how others will benefit	Measured malaria impact locally
Determine what level of engagement is required	Recognized that long-term malaria reduction in smelter community would require larger geographic impact
Identify where BHP is positioned to contribute uniquely	Brought specific management and operational skills to bear in LSDI initiative
Develop roadmap for engagement	Leveraged company wide examples of how to implement community based programs successfully
Ensure sustained corporate leadership and support	Value proposition for activities and quantified impact regularly communicated to senior management
Identify partners to compliment effort	Recognized need for government and NGO partnership to extend malaria impact
Use targeted approach	Initial focus on employees and local community, with a subsequent extension to the broader community
Establish clear metrics for success	Set malaria reduction targets
Shape external expectations	Ensured corporate support in communicating BHPBilliton’s commitment and plans for sustainable business practice

In addition to ensuring best practice activities, BHP Billiton is able to leverage its long history of corporate engagement on some of the most pressing social issues facing the communities in which they operate. The company’s many successful examples of interventions serve as a roadmap for executives, managers, and employees. In addition to those examples, BHP Billiton has instituted a number of other tools to guide corporate action and decision making. Examples of these include:²¹

- A formal guide to business conduct
- Documented sustainability principles (HSEC)
- A Forum on Corporate Responsibility to enable international NGOs and community opinion leaders to discuss and debate relevant social and environmental issues

Evaluation Process and Metrics

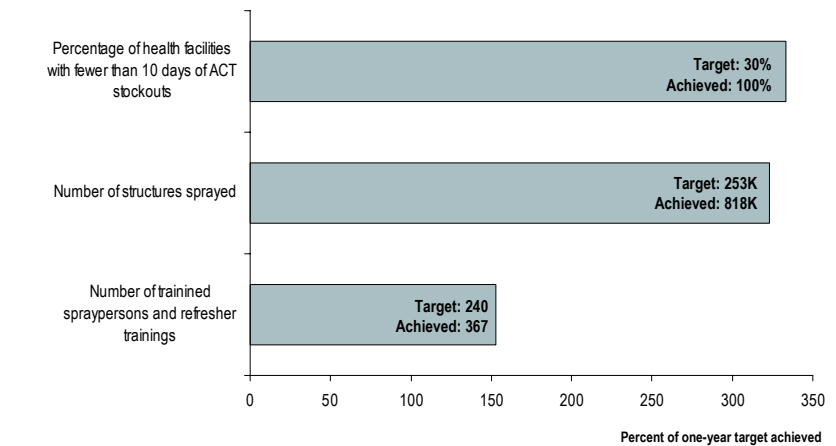
LSDI programme accomplishments are evaluated by tracking three key indicators:²²

- Intervention process (IRS, RDT, and ACT coverage)
- Biological markers (e.g., parasite prevalence rates, health facility malaria case load, and mosquito vector reductions)
- Effect on tourism (e.g., bed occupancy and job creation)

Evaluation Process and Metrics (continued...)

Examples of metrics tracked (in addition to the earlier mentioned incidence data) include statistics on ACT supplies, number of structures sprayed, and number of staff trained as shown in Figure 5.

Figure 5: Example Results Achieved 2003-2004



Note: Goals represent GFATM annual targets
 Source: *Malaria Control in the Lubombo Spatial Development Area*, August 2004 report.

The LSDI also introduced computer-based data tracking, a practice that had not previously been well-established in Mozambique and Swaziland. The LSDI's computerized system adds significant value to decision-making as it supports efficient and accurate data collection, management, and output related to malaria and population distributions. Data can be used, among other things, to:²³

- Provide malaria risk distribution data for tourist and tourism planning
- Assist in malaria control and planning of water resource developments
- Enable optimal allocation of spraying resources
- Ensure adequate supplies of ACTs and RDTs to all public health facilities

Future Plans

The LSDI expects to continue its programming into the future. Near-term initiatives include completing the rollout of ACTs, which is expected to conclude in 2006. The partnership is also focused on continuing to support local capacity building in Mozambique with an emphasis on supporting diagnostic capabilities and health worker preparedness for safe and effective ACT use.

Over the mid to long-term, the LSDI hopes to secure additional funding to expand its efforts. Activities will be focused in Mozambique with a goal of adding 60,000 kilometers of contiguous control area. The LSDI has received initial approval of an additional round of funding from GFATM to support its planned expansion. The LSDI is also focused on catalyzing similar initiatives in other geographies by sharing the LSDI's roadmap for success and best practices.

BHP Billiton and Mozal plan to continue their support of this important initiative. Recently the company donated USD \$600,000 to assist with malaria control in the city of Maputo. Recognizing the limited availability of drugs for malaria control, BHP Billiton is also sponsoring some activities of the Medicines for Malaria Venture, an international collaborative effort to discover and develop new drugs for the effective treatment of malaria. MMV was established in response to the failure of the market system to provide the required incentives for research and development of malaria treatment drugs.

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Future Plans (continued...)

“BHP Billiton is already making a significant difference in the communities they operate in by supporting malaria control programmes”, said Dr. Christopher Hentschel, CEO of MMV. “Now with their support for MMV to develop new antimalarial drugs, they are in fact making a major investment in the future. Without a continuous stream of new drugs, we will have no hope of controlling malaria”. BHP Billiton, because of its operations in malaria endemic regions, has both a social and economic alignment of interest with MMV in trying to reduce the burden of malaria. The relationship links directly with its Charter and Sustainable Development Policy.

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Endnotes

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2. BHP Billiton Malaria Case Study, Andre van der Bergh.
3. Andre van der Bergh, Interview 16 November 2005.
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5. Ibid. Mozambique constituted a prevalence reduction.
6. Results profile: Lubombo Region, Rolling Back Malaria in Southern Africa, Friends of the Global Fight Against AIDS, TB, and Malaria, February, 2005.
7. BHP Billiton's 2005 Sustainability Report: Socio-Economic Case Studies, www.sustainability.bhpbilliton.com.
8. When Politics Kills, Malaria and the DDT Story, Richard Tren and Roger Bate.
9. BHP Billiton Malaria Case Study.
10. LSDI: Malaria Control Programme.
11. BHP Billiton Malaria Case Study.
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13. LSDI: Malaria Control Programme.
14. Andre van der Bergh interview.
15. Results profile: Lubombo Region, Rolling Back Malaria in Southern Africa.
16. LSDI Malaria Control Programme.
17. BHP Billiton case study, Andre van der Bergh.
18. The Business Trust, www.btrust.org.za.
19. Malaria Control in the Lubombo Spatial Development Area, 2004, produced on behalf of the RMCC by the MRC and UTC.
20. BHP Billiton's 2005 Sustainability Report.
21. BITC.
22. LSDI: Malaria Control Programme.
23. Ibid.

Related Resources

Websites

Partnership Resources

LSDI initiative: <http://www.malaria.org.za/lsgi/home.html>

LSDI Partner Websites

BHP Billiton: <http://www.bhpbilliton.com/bb/home/home.jsp>

The Business Trust: <http://www.btrust.org.za/>

The Global Fund to Fight Aids, Tuberculosis, and Malaria: <http://www.theglobalfund.org/en/>

Medical Research Council: <http://www.mrc.ac.za/>

Regional Malaria Control Commission:

http://www.malaria.org.za/lsgi/Overview/regional_malaria_control_commi.html

The University of Cape Town, Division of Pharmacology: <http://web.uct.ac.za/depts/pha/>

This Case Study was drafted by a team from the Boston Consulting Group, including Lisa Carpenter, Dave Matheson, Adrian McKemey, Ruchi Warriar and Wendy Woods, and in collaboration with the featured organizations. Further input and project management was provided by Francesca Boldrini and David Kim of the Forum's Global Health Initiative. However, GHI member companies and partners, The World Economic Forum and the contributing organizations do not necessarily subscribe to every view expressed herein.

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