PROJECT MEMORANDUM
MAY 2011

MOSQUITO NETS
MALARIA ERADICATION
BOTSWANA

ROTARY CLUB OF GABORONE
DISTRICT 9400
EXECUTIVE SUMMARY

In the past ten years remarkable efforts on malaria control and elimination have been observed in Botswana. The implementation of proven quality and effective interventions has led to the reduction of the burden of malaria.

The conception of the 1997 Accelerated Malaria Control Programme, Roll Back Malaria Partnership (RBM) in 1998, and the Millennium Development Goals in 2000, together with the development and dissemination of improved tools, all have made significant reductions in malaria transmission in Botswana.

In April 2008 NMCP with its partners decided to undertake a midterm review of the Malaria strategic plan (2006 - 2011) and the programme further decided to do in-depth performance review of the malaria control with a view to redesign and refocus the programme towards malaria elimination.

WHO guidelines, tools and questionnaires on malaria programme review were adapted and used for the review. Preparatory phase (Phase 1) was initiated in November 2008 and the Phase 2 field review was undertaken during August 2009.

The key review findings include Malaria Epidemiology, Malaria Programme Management, Malaria Diagnosis and Treatment, Vector Control and Personal Protection, Epidemic Preparedness and Response, Advocacy, Information, Education, Communication and Community Mobilisation, and Surveillance, Monitoring and Evaluation.

During 2008 the Rotary Club of Gaborone adopted malaria eradication as a community services project and joined forces with the Rotary Club of Charlotte, North Carolina USA to fund the purchase of 5,200 Long Lasting Insecticide Treated Nets (LLIN) through UNICEF in February 2010.

The Ministry of Health in Botswana, in collaboration with WHO launched the malaria elimination campaign in 2010 and invited the private sector and community leaders to support the initiative. The Rotary Club of Gaborone is represented on the Malaria Partnership and has undertaken to procure the Long Lasting Insecticide Treated Nets (LLIN) requirement as an essential part of the personal protection programme.
BACKGROUND

The Malaria Partnership comprises representatives of the Clinton Foundation, The Anglican Church, the US Embassy, SADC, Roll Back Malaria, Stanbic Bank, Standard Chartered Bank, De Beers Holdings and other governmental departments and NGOs.

Rotary Club of Gaborone attends the quarterly meetings and took part in the planning of the mass distribution of the LLIN during July 2010. The target area was confirmed as Nata/Gweta in the Tutume Sub-District of North West Botswana.

The Government of Botswana has targeted 2015 as the date to eradicate malaria in Botswana and the current shortfall in supply of LLIN is 211,000.

Insecticide-treated mosquito nets, LLIN are one of the most effective methods for the prevention of malaria in sub-Saharan Africa where over 2 million people die every year as a result of the disease, the majority of its victims being pregnant women and children under five. LLIN have been shown to decrease severe malaria by 45%, reduce premature births by 42% and cut all-cause child mortality by 17%-63%. For every 1000 LLIN utilized, the lives of 5.5 children (under age 5) are saved.
An LLIN is a mosquito net impregnated with insecticide.

The insecticide is cleverly bound within the fibres that make up the netting and is 'slow released' over a 4-5 year period. Hence 'long lasting'.

Insecticide treated nets therefore provide two levels of protection.

- First as a mechanical barrier against the bites of malaria-carrying mosquitoes and
- Second as a means of killing mosquitoes on contact with the insecticide.

Insecticide coated nets are so important because they kill mosquitoes that land on them, drawn to the nets by the odour of the person sleeping beneath it. This 'knock down' or killing of the mosquito is the single greatest thing that protects the person sleeping under the net. Nets can develop small holes over time and on nets not treated with insecticide mosquitoes can find their way through and bite. With insecticide treated nets, even with a few holes, they still remain 90 to 95%+ effective, as when the mosquito lands on the net it is knocked down and killed.

These nets are safe for children as the quantity of insecticide a child might ingest by licking their hands after touching the net are small enough not to cause any harm. The small amount that transfers to the relatively tiny mosquito however, which is a million times smaller than a small baby, is enough to kill it.

- Malaria kills a child somewhere in the world every 30 seconds.
- Malaria infects at least 500 million people each year, killing 1 million.
- Ninety per cent of malaria deaths are in Africa.
- Malaria accounts for about one in five of all childhood deaths in Africa.
Malaria Transmission Season
(week 44 - 2010 to week 5 - 2011)

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<th>Confirmed Cases</th>
<th>Deaths</th>
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<tr>
<td>2010/2011</td>
<td>1258</td>
<td>402</td>
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The above chart is from the Ministry of Health and indicates that in the recent transmission season there has been a marked decrease in total number of malaria cases; the gap between unconfirmed and confirmed malaria cases has decreased and that the number of deaths remains low.

This is excellent news for the Malaria Control Programme.
OBJECTIVE

The World Health Organization (WHO) has issued new global guidance for the use of insecticide-treated mosquito nets to protect people from malaria. For the first time, WHO recommends that insecticidal nets be **long lasting**.

Long lasting insecticidal nets (LLIN) are being promoted by WHO and *Roll Back Malaria* partners as a cost effective and sustainable method for protection against malaria. LLIN are nets treated in the factory with an insecticide incorporated into the net fabric which makes the insecticide last at least 20 washes in standard laboratory testing and three years of recommended use under field conditions. With LLIN therefore the time consuming method of retreating old nets is no longer necessary.

**Rotary Club of Gaborone** is attempting to establish links with Rotary Clubs overseas and form a series of partnerships to secure financial support through the **ROTARY FOUNDATION** in order to purchase 200,000 LLIN at an estimated cost of US$ 1 million.

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CONCLUSION

The long lasting insecticide net **LLIN** is seen as offering African countries the best chance in malaria prevention. Not only is it cheaper in the longer term, but it comes factory pre-treated and retains its repellent efficacy throughout the normal lifespan of the netting material itself, which can be anywhere between two to five years.