



**Report of the launch of the Survey to Evaluate the Effectiveness of
Malaria Control Interventions in Kunene Province, Angola, 15 – 17
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1.0 Background

The Trans-Kunene Cross-border Malaria Initiative (TKMI) runs along the border area shared by Angola and Namibia in which 100% of the people are at risk of malaria. There exists a disparity/gap in the stages at which the Angola and Namibia malaria control programs are: the Namibia program is more advanced while the Angolan civil war made it difficult to make notable gains. Following years of sustained control, Namibia is now one of the countries in Southern Africa which has been selected for malaria elimination. This has presented an opening for Angola to strengthen its program leading to malaria elimination.

Kunene is one of the Angolan provinces in the Trans-Kunene Malaria Cross-border Initiative (TKMI). The province is prone to perennial floods which present annual threats to malaria epidemics. This is further compounded by frequent movement of malaria-affected populations within the TKMI region and is also associated with high malaria transmission including import and export of malaria parasites from one district to another. These periodic outbreaks of malaria are correlated with increased malaria morbidity and mortality in the TKMI region, resulting in both Angola and Namibia failure to effectively control and ultimately, eliminate malaria. Despite the increased mobilization of domestic resources and the scale-up of interventions by these countries to avert malaria outbreaks, cross-border transmission of malaria has yet to be tackled by country-specific approaches alone. This realization by the Angola NMCP that the Southern districts bordering Namibia could open the gates for malaria elimination in Angola led to the development of the Kunene Province trial using mixed interventions.

2.0 Method

To start implementation of the Kunene province trial, the Angola National Malaria Control Program (NMCP) in 2010 put in place a robust action plan to reduce malaria morbidity and mortality in the region. This plan included targeted Indoor Residual House Spraying (IRS), Long Lasting Nets (LLINs) distribution in selected communities, and introduction of Larviciding in all potential breeding sites. These breeding sites were identified, mapped and communities trained to use larviciding in breeding sites within the periphery of their own habitats. Follow up/supervisory visits were carried out periodically in all breeding sites to ensure the efficacy of larviciding. To ensure elimination of parasites among the communities, Rapid Detection Test (RDTs) and ACTs were made available in all health facilities and health workers trained. A circular of guidelines which directed them that ACTs were to be given only when there is a positive RDT or microscopy test was distributed to all health facilities. This provided the first ever multi-pronged intervention trial carried out in this region. By launching this project, Angola had **Declared Total War Against Malaria** in the Trans-Kunene Cross-border Malaria Initiative (TKMI) Region.



3.0 Supporting Partners

- **Laviciding:** is being spearheaded by the Cuban Team . the team introduced larviciding for the first time by mapping all potential breeding sites and training both the NMCP teams and communities to carry out their own laviciding in breeding sites surrounding their habitats. This was supported by on-going supervisory visits and sampling by a highly technical Cuban larviciding team to ensure on-going monitoring of the effectiveness of the Larvicides and resistance monitoring. The introduction of Larviciding by the Cubans has added another intervention to the already on-going LLINs distribution and IRS in the Kunene Province.
- **IRS:** RTI is carrying out IRS targeting selected communities
- **LLINs:** Nets for Life (an Anglican Church Organization) which is also operating in Namibia and soon joint and synchronized LLINs distribution will be carried out.
- **RDTs and ACTs:** from the Global fund are supplied by the NMCP with technical support from WHO
- **Packaging of information, Plans and documents:** CHAI-SAMEST is supporting with packaging of district action/operational plans and concept documents
- **Resource mobilization:** SARN Secretariat is supporting with coordination of partners and mobilizing resources and development of district action plans

4.0 Objective

To evaluate the combined impact of IRS, LLINs, Laviciding, RTDs and ACTs on malaria deaths, cases and vector bionomics.

5.0 Evaluation Procedure

To evaluate the efficacy of these combined interventions, a team of local and international experts (WHO, Cuban, SARN) was assembled. This evaluation included RDT tests in school children of age below 10 years, entomological survey (knockdown, laval) and checking on clinical registers at health facilities. PCR, elisa confirmatory samples were collected. Three sites were selected for the evaluation: Santa Clara Community . Namakunde district (Santa Clara is the border post between Angola and Namibia in the Kunene province and Ohangwena regions respectively) which is the cross-border community in which malaria morbidity and mortality is high: Xangongo District which is further inland and Odnjiva city area (Odnjiva is the Kunene provincial capital). These sites were selected because that is where the combined interventions were carried out.

6.0 Field visits

The evaluation started with the evaluation team meeting and agreeing on where to start and dividing the teams into: (a) entomological survey and (b) epidemiological survey. Field visits started in Santa Clara on Day one followed by Xangongo on Day two and Odnjiva city area on Day 3.

Results of the evaluation will be mad available once completed and RDT tests verified by PRC and Elisa techniques



The evaluation team discussing and planning the survey methodology



Knocking down mosquitoes



Checking for mosquitoes after knockdown



Checking for mosquitoes



Breeding site with larvicides in it



LLINs can be used in any type of habitat



Large bodies of water exist in this region



Children waiting for RDT screening



Mobile Laboratory can be used to strengthen outreaches



Sleeping with no protection from LLINs



Using a magnifying Glass to identify the mosquito species



They need protection from malaria



SARN Focal Point discussing with the Cuban Laticiding Team Leader in the field



Collecting water samples to check for laval activity



Dr Cani (Entomologist) getting into difficult terrain



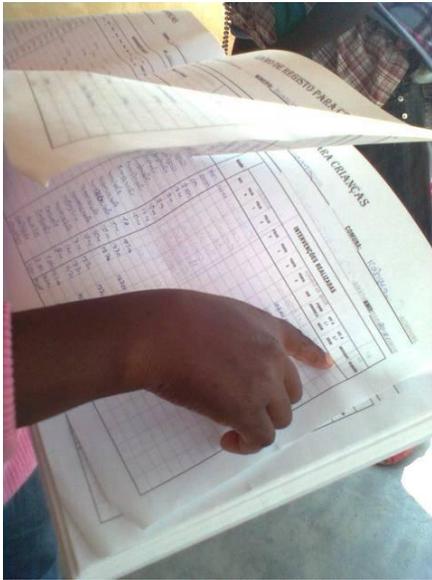
Poor access is not only limited to terrain



Collecting a blood sample



Sample analysis (RDT) and storage for PCR



Checking through Data registers



Mothers carrying road to health Card