IN PARTNERSHIP FOR MALARIA CONTROL IN AFRICA.
LABIOFAM IN PARTNERSHIP FOR MALARIA CONTROL IN AFRICA.
PHASE 1: THEMATIC REVIEW AND PLANNING.  
PHASE 2: IMPLEMENTING THE PROGRAMME.  
PHASE 3: MONITORING AND EVALUATION
Phase 1 – Thematic Review & Planning
PHASE 2: IMPLEMENTING THE PROGRAMME.

1- Informing and sensitizing the local authorities and the community.
2- Distributing the biolarvicides.

2.1- DISTRIBUTION TO THE PROVINCES.

2.2- LOCAL DISTRIBUTION.
3- TRAINING THE STAFF AND THE COMMUNITY HEALTH WORKERS.

ZAM: 2,784 TRAINEES
THE SURVEILLANCE SYSTEM WILL BE BASED ON REAL DATA ABOUT:
Malaria diagnosis.
Estimated % of healthy carriers
Actual problems with malaria treatments
Antimalaria drug resistance. Malaria epidemiology.
Epidemiological data concerning to prevalence, incidence, impatient admissions rate and death rate if there is any and others specific epidemic index of a similar period one year ago and during the pilot project should be registered.

Vector bionomic research before, during and after the program application will be based on:
Larval index using the ladle method an accounting and classifying the larvae by specie and stage.
Man-hour bites. Biting behavior.
Resting sites
Longevity
Quantity of vector per room
Entomological inoculation rate
5- MAPPING AND LARVICIDING.

VISITING 100 % OF THE BREEDING SITES REFERED BY THE COMMUNITY HEALTH WORKERS.
### OPERATIONAL IMPACT

100% of larval reduction after 72 hours of the treatment.

<table>
<thead>
<tr>
<th>Provinces</th>
<th>LUAPULA</th>
<th>Northern</th>
<th>EASTERN</th>
<th>Lusaka</th>
<th>Grand Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Number Of Health Facilities Visited</td>
<td>104</td>
<td>116</td>
<td>199</td>
<td>82</td>
<td>501</td>
</tr>
<tr>
<td>Total Number Of The Visited Breeding Sites</td>
<td>1,727</td>
<td>2,099</td>
<td>990</td>
<td>762</td>
<td>5,578</td>
</tr>
<tr>
<td>Dry Breeding Sites</td>
<td>151</td>
<td>46</td>
<td>78</td>
<td>86</td>
<td>361</td>
</tr>
<tr>
<td>Total Number Of The Breeding Site Mapped</td>
<td>1,482</td>
<td>1,329</td>
<td>78</td>
<td>632</td>
<td>3,521(63.12%)</td>
</tr>
<tr>
<td>Total Number Of Breeding Sites Treated</td>
<td>1,347</td>
<td>2,014</td>
<td>822</td>
<td>486</td>
<td>4,669(83.7%)</td>
</tr>
<tr>
<td>Total Amount Distributed</td>
<td>Griselesf 20 L</td>
<td>2,980</td>
<td>18,620</td>
<td>17,080</td>
<td>11,700</td>
</tr>
<tr>
<td></td>
<td>Bactivec 20 L</td>
<td>17,260</td>
<td>12,820</td>
<td>18,680</td>
<td>2,460</td>
</tr>
<tr>
<td></td>
<td>Bactivec 30 ml</td>
<td>80,714</td>
<td>88,844</td>
<td>156,216</td>
<td>165,821</td>
</tr>
<tr>
<td>Date When The Treatment Was Initiated In The District</td>
<td>04-Jul-12</td>
<td>02-Feb-11</td>
<td>01-Nov-10</td>
<td>19-Nov-10</td>
<td>01-Nov-10</td>
</tr>
<tr>
<td>Date When The Treatment Was Finished In The District</td>
<td>23-Nov-11</td>
<td>05-Apr-11</td>
<td>03-Dec-10</td>
<td>28-Dec-10</td>
<td>15-Dec-11</td>
</tr>
<tr>
<td>Total Amount Applied</td>
<td>Griselesf 20 L</td>
<td>2,980</td>
<td>15,249</td>
<td>16,135</td>
<td>6,548</td>
</tr>
<tr>
<td></td>
<td>Bactivec 20 L</td>
<td>17,260</td>
<td>11,193</td>
<td>16,039</td>
<td>2,440</td>
</tr>
<tr>
<td>Total Sqm Applied With</td>
<td>Griselesf 20 L</td>
<td>596,000</td>
<td>6,984,000</td>
<td>2,973,354</td>
<td>1,312,068</td>
</tr>
<tr>
<td></td>
<td>Bactivec 20 L</td>
<td>3,528,000</td>
<td>6,303,906</td>
<td>6,959,312.50</td>
<td>470,000</td>
</tr>
<tr>
<td>Total Hectares</td>
<td>412</td>
<td>2,708</td>
<td>643</td>
<td>199</td>
<td>3,962</td>
</tr>
<tr>
<td>Health Facilities Monitored And Evaluated.</td>
<td>79</td>
<td>42</td>
<td>41</td>
<td>25</td>
<td>187</td>
</tr>
<tr>
<td>Total Population Who Benefit</td>
<td>811,781</td>
<td>1,085,195</td>
<td>1,738,419</td>
<td>1,725,368</td>
<td>4,428,786</td>
</tr>
</tbody>
</table>
ENTOMOLOGICAL MAP OF ANGOLA

LEYEND

- **Aedes aegypti**
- **Culex sp**
- **Anopheles gambiae s.s**
- **Anopheles funestus**
- **Anopheles melas**
- **Anopheles nili**
- **Anopheles arabiensis**
- **Anopheles coustani**
- **Anopheles faroensis**
- **Anopheles ziemmani**
- **Anopheles listeri**
- **Anopheles welcomei**
- **Anopheles obscurus**
- **Mansonia sp**
- **Glossina palpalis**
- **Glossina morsitans**
- **Glossina fuscipes quanzenzis**
- **Glossina schwetzi**
- **Simulium** (mosca preta)
- **Sede municipal**
Adults mosquitoes density behavior in Port Harcourt. NIGERIA.
ENTOMOLOGICAL IMPACT.

REDUCTION OF THE POSITIVE BREEDING SITES TO ANOPHELINES AND CULICINES MOSQUITOES 6 MONTH AFTER INITIATED THE PROGRAMME.

REDUCTION OF THE POSITIVE BREEDING SITES 6 MONTH AFTER INITIATED THE PROGRAMME WITH THE CONSECUTIVE REDUCTION OF THE AMOUNT OF LARVICIDES TO BE APPLIED.

DAR ES SALAM, TANZANIA.
Household Catches by Knock down techniques (sentinels areas)

**RAINY SEASON IN ACCRA 2011**

<table>
<thead>
<tr>
<th>SUBMETROS</th>
<th>Mosquitoes Density/House before applications</th>
<th>Mosquitoes Density/House after applications</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Anopheles</td>
<td>Culex</td>
</tr>
<tr>
<td>Ablekuma Central</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>Ablekuma South</td>
<td>5.6</td>
<td>10.2</td>
</tr>
<tr>
<td>Ayawaso West</td>
<td>7.2</td>
<td>12</td>
</tr>
<tr>
<td>La</td>
<td>6.0</td>
<td>16</td>
</tr>
<tr>
<td>Osu</td>
<td>5.4</td>
<td>10.4</td>
</tr>
<tr>
<td>Okai Koi North</td>
<td>7.2</td>
<td>9</td>
</tr>
<tr>
<td>Okai Koi South</td>
<td>6.0</td>
<td>11</td>
</tr>
<tr>
<td>Ashiedu Ketekoe</td>
<td>4.2</td>
<td>11</td>
</tr>
</tbody>
</table>

**ABOVE 52% REDUCTION OF ANOPHELINE MOSQUITOES DENSITY PER HOUSE.**
EPIDEMIOLOGICAL IMPACT.

ANGOLA

MALARIA TRENDS IN ANGOLA, 2009-2011.
Monthly Confirmed cases in Accra Metropolis 2009-2011.

Source: MOH 2011
Average of monthly total malaria cases from 2009 to 2010 compared with 2011, showing a marked reduction of 57.93% after larviciding (from May to October) in Port Harcourt, Nigeria.
MALARIA CASES IN NON IRS DISTRICTS BEFORE AND AFTER IMPLEMENTED THE NATIONAL LARVICIDING PROGRAMME

GRAPHIC 6: Impact in a non IRS district
Cost & benefits of the programme.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Manual Spraying</th>
<th>Aerial Spraying</th>
</tr>
</thead>
<tbody>
<tr>
<td>USD Per Inhabitant Benefit</td>
<td>0.69</td>
<td>0.01</td>
</tr>
<tr>
<td>USD Per Travelled Km</td>
<td>36.28</td>
<td>N/A</td>
</tr>
<tr>
<td>USD Per Treated Hectare Of Breeding Sites</td>
<td>2.12</td>
<td>28.7</td>
</tr>
</tbody>
</table>

Economists believe that malaria is responsible for a ‘growth penalty’ of up to 1.3% per year in some African countries.

Total population who benefit = 4,428,786
“The global campaign against malaria has shown what is possible when the international community joins forces on multiple fronts to tackle a disease that takes its heaviest toll on poor and underprivileged populations... The advances of recent years show that the battle against malaria can be won.”

UN Secretary General Ban Ki-Moon
WAY FORWARD TO PROVIDE SERVICES OR COMODITIES.

• We should officialice our partnership with RBM network for SADC.
• Countries should officially request our collaboration through a letter addressed to:
  • Dr. Félix Quintanar Pulido.
  • Email: labiodom@yahoo.es
  • Tel/Fax: (+233)302543086
  • C/c: Dr. Aramis Martínez Arias:
    • Email: amarias2010@yahoo.es; amarías@airtelzm.blackberry.com; aramismt@infomed.sld.cu
• Asking for collaboration and with the comprehensive programme for the visit .(letter could be scanned and send by email or by fax).
• There will be a first visit to the country in particular interested ,, with the aims to meet relevant authorities and institutions to exchange our results and experiences and coordinate further actions related to the collaboration per se.
• A bilateral agreement should be signed for the technical collaboration.
Commodities and services to be provided:

- Provide **technical assistance and expertise** to implement the programme, inclusive planning, according with the conditions signed in the agreement.
- Provide **capacity building** for local staff and community health workers in mosquito control and malaria control.
- Provide **biological larvicides** to implement the programme.
- Provide assistance in **impact evaluation** of the programme, **data collection, surveillance system**, and other areas related to malaria control.
- Provide **technology transference** for the countries or region interested in producing the biological larvicides and support countries for **external funds mobilization**.