LSM using biolarvicides in Niger with Cuban cooperation

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Entomologiste Medicale
Outline

I. Description of the NMCP strategy

II. Context and project justification

III. Project objectives

IV. Project status

V. Efficacy tests

VI. Monitoring and evaluation

VII. Future activities
I. NMC main strategies against malaria

**PREVENTION:**
- LLINs
- IRS
- LSM
- SMC
- IPTp

**TREATMENT:**
- Diagnostic, Treatment in communities and health facilities, referrals

**SURVEILLANCE/RIPOSITE:**
- Detection and riposte to epidemics

**SUPPORT STRATEGIES:**
- Monitoring/Evaluation,
- Advocacy/BCC,
- Operational research,
- Partnerships,
- resource mobilisation,
- capacity building,
- program management
Stratification and interventions against malaria

Hypo-endemic zone: LSM, ACT, RDT, IRS, treatment at home, epidemics management

Hyper-endemic zone: LSM, treatment at home, epidemics, SMC, ACT, RDT, IPT, LLINs

Meso-endemic zones: ACT, RDT, IPT, LLINs, LSM, treatment at home, epidemics management, IPT, SMC

Source: Data Manager / PNLP
II. Context and project justification

- Malaria remains a public health problem in Niger
- High mortality and morbidity due to malaria
- Malaria constitutes around 20% of consultations in dry season and 80% in rainy season
- The most at risk groups are children under five and pregnant women
III. Project objectives

- LSM is one of the strategies for vector control in the National Strategic Plan for Niger
- Convention between Niger and Cuba: Implementation of a larviciding project using bio-larvicides

Main objectif

- Larviciding with bio-larvicides (BACTIVEC® and GRISELESF®) to reduce malaria transmission
Specific objectives

 ✓ Include larviciding with BACTIVEC® and GRISELESF® in the vector control national strategy

 ✓ Larviciding implementation

 ✓ Test the efficacy of the project

 ✓ Improve entomological surveillance and maintain a good level of control

 ✓ Improve community awareness and involvement in vector control
IV. Project status

- Project launch
- Workshop to reach consensus on the project with participation of administration and technical authorities of target regions
- Larviciding equipment and hosting the Cuban experts in Niger
- Payment of Cuban experts
IV. Project status

- Ordering and reception of bio-larvicides (Bactivec, Griselesf)

- Acquisition of logistics and equipment necessary for the project
IV. Project status

- Training of two NMCP technicians in Applied malaria entomology and public health at CREC
- Training of fieldworkers in larvicide application
IV. Project status

- Baseline entomology surveillance
- Baseline epidemiology surveillance
- Mapping and treatment of breeding sites
Sensitisation of authorities and communities through meetings, billboards, radio and TV ads, etc.
V. Efficacy testing

- Lab tests of larvicides efficacy
- Supervision of field testing activities
## Efficacy of Bactivec® and Griselesf® on stage 2 Anopheles larvae

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Efficacy of Bactivec® and Griselesf® on stage 4 Anopheles larvae

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VI. Monitoring and evaluation

- Entomological monitoring:
  - Anopheline density
  - EIR
  - Biting pressure
  - Mosquito behaviour
Average monthly An. gambiae density

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Hyper-endemic zones

- Tessaoua: No larviciding
- Gaya: No larviciding
- Niamey V: Larviciding zone
- Balleyara: August=59.6, October=7
- Agadez: August=7, October=0.6
- Ingal: August=0.6, October=7
Human biting rate per night

HBR in HLC

- AGADEZ: 59.76% (August), 2.50% (October)
- TESSAOUA: 61.00% (August), 5.00% (October)
- NIAMEY V: 35.00% (August), 8.25% (October)
- BALLEYARA: 95.00% (August), 87.25% (October)
- GAYA: 99.25% (August), 81.25% (October)
- ZINDAROU: 21.75% (August), 72.75% (October)
- INGAL: 0.25% (August), 1.00% (October)
VII. Future activities

- Finalise breeding sites treatment for the first phase of the project
- Continue monitoring breeding sites to test the larviciding efficacy
- Start larviciding activities in second phase regions
- Evaluation of first phase activities
- Identification of other partners to expand the project in the whole country.
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