



Center for  
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Programs



# Misuse of LLINs in Tamatave II, Madagascar

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# Global misuse of LLINs is rare

- Eisele 2011
  - Misuse in Luangwa District (fishing area): only 3% of households reported nets used for other purposes
- Among 14 household surveys in 4 countries, and 4,109 nets that had left households, only 6% of these were reported as used for other purposes
- That is, 255 nets, out of a universe of 14,196 nets reported owned in those households = 1.8% of total nets
- More importantly – nearly all these nets (75%) were categorized by the households as too torn or too old

# In Madagascar

- In the big scheme of things, the numbers are small
- But in focal areas, the problem is real

# Methods

- Sampled two fishing areas in Tamatave II, where misuse has been reported
- Convenience sample of interviews with:
  - 20 fishermen / community members
  - 4 local officials (Mayor, Police)
  - 4 malaria prevention implementers

# Categories of alternative use / misuse





























# Framing the issue

- Are the nets detracting from malaria prevention?
- Is there collateral damage by using mosquito nets for fishing?

# Fishing with LLINs is rational behavior

- Cost
  - Free or bought at the market for 3,000Ar or \$2.50
  - Traditional fishing net material costs 25,000Ar or \$12.50
- Efficiency
  - One LLIN can make 4 to 5 fishing traps
  - One trap can get 1 kilo of fish a day for 4,000Ar = \$4/day
- Time
  - Using an LLIN, a fisherman can finish making a trap in one day
  - Weaving a traditional net takes up to 3 weeks to finish one





# Community perspectives

- Everyone interviewed knows using mosquito nets for fishing is “wrong”
- Availability of fishing nets in local markets is decreasing
- Fish stocks are dwindling because of large-scale commercial fishing; use of LLINs by traditional fishermen contributes further
  - Insecticide - pyrethroids are poisonous to fish
  - Small holes, capturing all the small fish



# Community perspectives, cont.

- “Nets will always be provided by the government”
- Any action taken to stop use will need to come from outside as local enforcement agents are afraid of re-election and/or retaliation



# What have communities done in response?

- Community driven measures
  - Mayor initiated public meetings, fine was instituted at 25,000Ar or \$12.50
    - 10,000Ar to the person who catches the misuse
    - 10,000Ar to the fokontany
    - 5,000Ar to the commune
- Capture and burn the nets
- Public embarrassment of fishermen
- Local government issue a “decree” banning LLIN use for fishing (case of Antsinana Region)

# Responses

- Local responses are needed
  - Social norms
  - Increased awareness
- Responses should consider all factors, to ensure minimal harm will be done
  - Confusing regulations
  - Burning nets are not environmentally sound

REPOBLIKAN'I MADAGASIKARA  
Fitiavana-Tanindrazana-Fandrosoana

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MINISTRE DE LA PECHE ET DES  
RESSOURCES HALIEUTIQUES

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Arrêté N° 3053/2013

Portant réglementation de l'utilisation de certains engins de pêche  
dans la région d'ATSINANANA.

LE MINISTRE DE LA PECHE ET DES RESSOURCES HALIEUTIQUES

**Article 3 :** L'utilisation du « ramikaoko » ou « haratobe » (senné de plage), et « tulle moustiquaire » sont strictement interdits dans la Région d'ATSINANANA ;

**Article 4 :** Les caractéristiques techniques des *tulles moustiquaires* réglementaires strictement réservée à la capture des vily sont les suivantes :

- Longueur maximale: ..... 4 mètres
- Chute ou hauteur maximale: 2 mètres
- Maillage minimum: 2 mm

L'utilisation de « tulle moustiquaire » pour la capture des vily est seulement sur les embouchures ;

Avec des vily, on entend : vily olitra (bichique), vily mena (varilava), vily afotra (civelles)





# Suggestions derived from interviews

- A national law that prohibits fishing with LLINs
- Address the supply side incentives
- Work with ministry of tourism and ministry of defense
- Subsidize fishing nets to ensure they are affordable for fishermen
- Distribute nets in the fishing areas that are less-preferable for fishing







# Significance to malaria prevention efforts

- Most of the sleeping spaces observed were covered with an LLIN – people are protected
- Many fishermen reported purchasing their nets in the local market- our team did not find donor-funded nets for sale in the market

# Take home message

- The problem is real
- The problem is focal
- Driven by economics
- Solutions need to be local, with guidance on best practices
- In the big scheme of things, the numbers are small

# Thank you!

