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Implementation Research in Dengue Control

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LOCALLY ROOTED, GLOBALLY RESPECTED



Estimated Burden of Dengue Globally

Global Apparent and Inapparent Burden: 390 Million



Apparent (Any Symptom, Millions)



67.1—135.6
Credible Interval
(Total Cases)

Inapparent (Asymptomatic, Millions)



217—392.3
Credible Interval
(Total Cases)

Africa Asia Americas Oceania

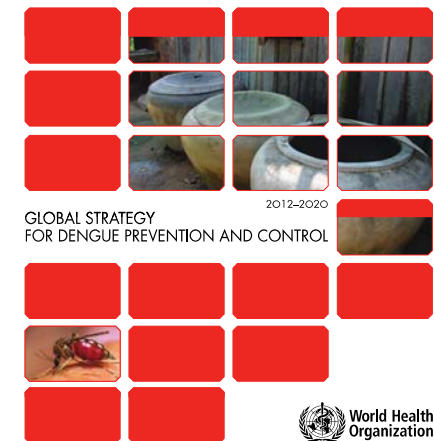
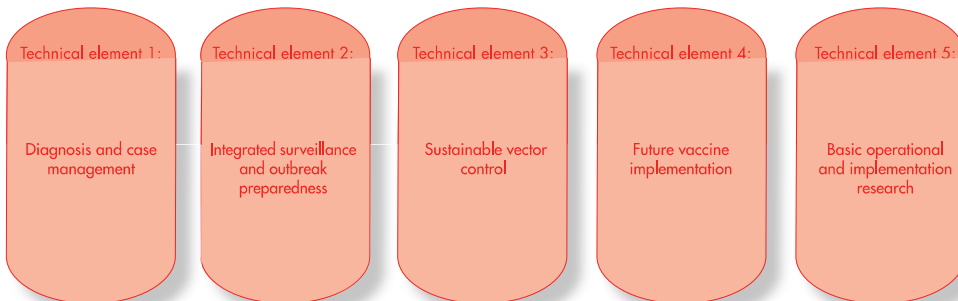
Bhatt et.al 2013

Global Dengue Control Strategy



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GOAL:
TO REDUCE THE BURDEN OF DENGUE



Element 5: Basic, Operational and IR



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Clinical
management

Point of care
diagnostic test

Early outbreak
response

Indicators for
outbreak risk

Transmission
dynamics

Development
& evaluation
of vaccine

Integrated
vector control

Tool to
prevent
outbreaks

IR for scaling
up local
strategies



IR is a systematic approach that...

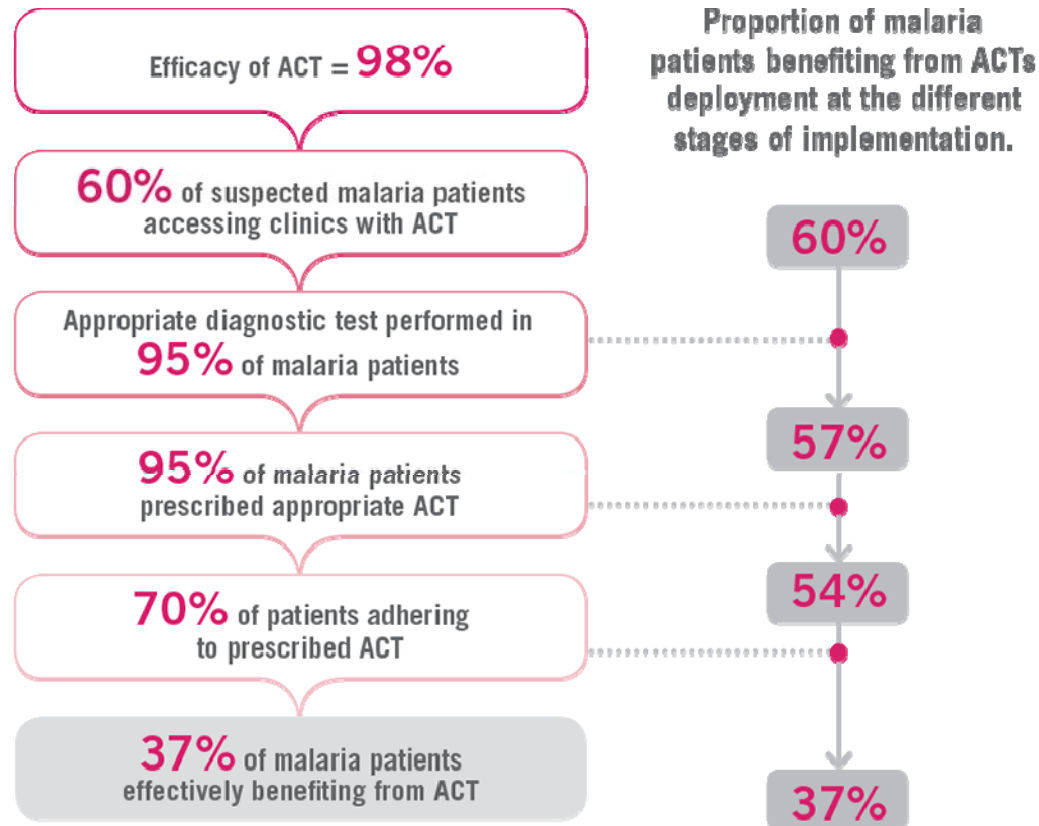


Identifies implementation bottlenecks

Identifies optimal approaches

Promotes Uptake of research findings

Implementation Research problems





Implementation research questions

- Dengue vaccine efficacy
- Access to vaccine (?)
- Provider adherence (?)
- Patient adherence (?)
- Vaccine effectiveness (?)

50%

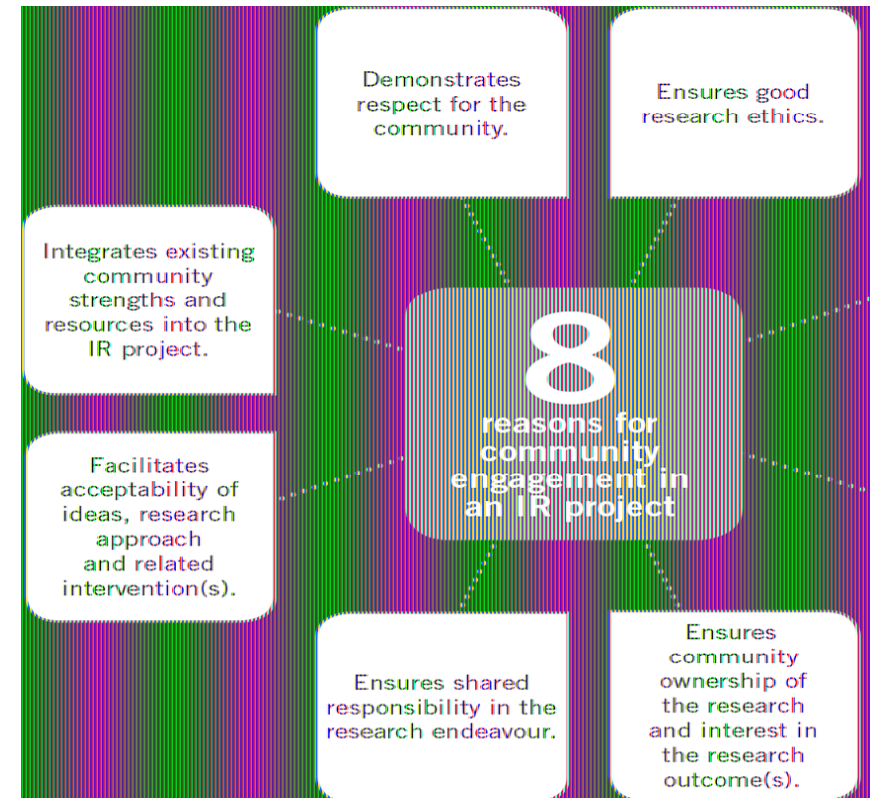
What are the bottlenecks and appropriate interventions required to maintain the efficacy?

??%



Implementation challenges in dengue control

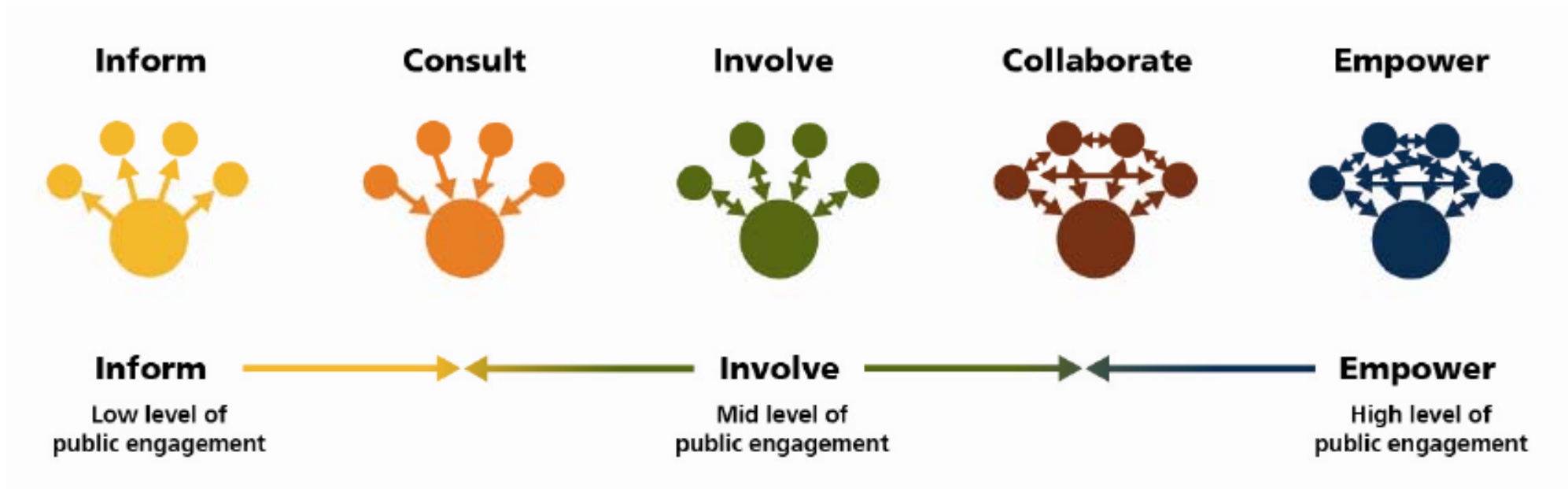
- Many dengue control strategies requires:
 - a strong community support and participation
 - Continuous and consistent intervention
- Sustainability is a big issues
- Appropriate community engagement strategy is critical



Why community engagement?



Level of community engagement and support



(IAP2 engagement spectrum)



Case 1: IR to Identify implementation bottleneck

- Lack of interest and commitment from local People's Committee,
- Lack of enthusiasm of mass organizations and community leaders,
- Work overload and lack of communication skills from health sector,
- Low awareness and readiness from community,
- Lack of detailed policy guidelines and low enforcement of related policy, and
- Limited budget

**Barriers to engaging communities in dengue control program:
An implementation research in an urban area in Hanoi city, Vietnam**
Nguyen Tien Thang¹, Ari Probandari², Riris Andono Ahmad^{3,4}

Case 2: Developing engagement strategy



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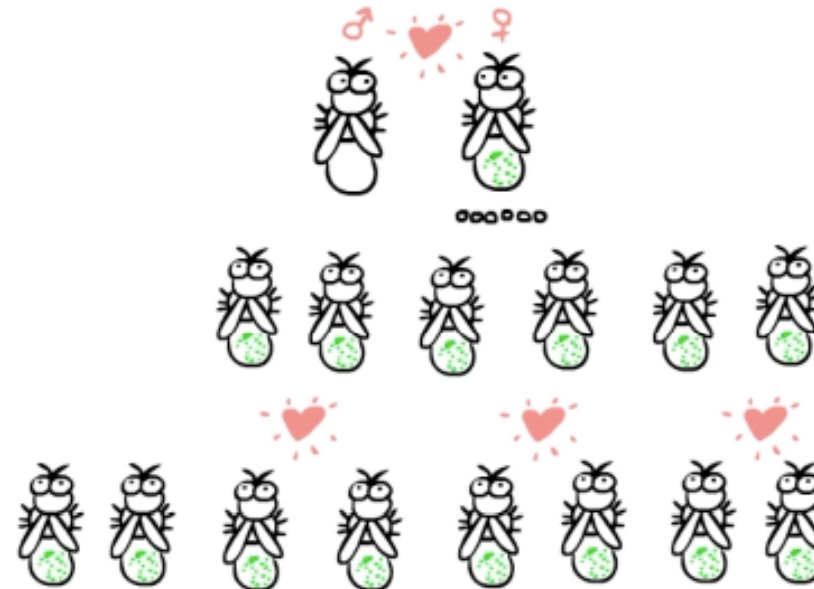
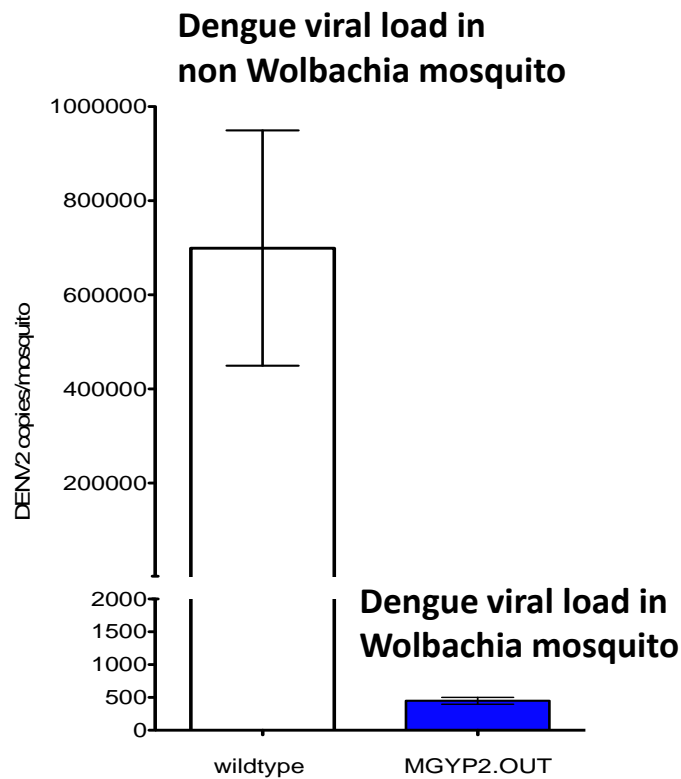


Introducing *Wolbachia* technology to control dengue in Indonesia





Wolbachia technology



Walker et al. (2011) Nature 476: 450-453



Implementation challenges

- New technology
- Counter intuitive application of technology
- Require a strong community acceptance and support



Contextual factors

Study site: Yogyakarta city



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- An urban area
- 33 km² area
- Population > 400,000
- 125,000 households





Community resistance due to poor engagement





Community engagement strategies



Contextual factor of the community



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- Paternalistic society
- Avoid open conflict to maintain harmony
- Conflict resolution is complex and often difficult
- Community leaders make decision on behalf community
- No clear cut community rules
- Consensus building rather than rule of majority

Yogya Special Region *Sociopolitical Structure*



Province (Propinsi)

District/Municipality
(Kabupaten/Kota)

Sub District (Kecamatan)

Urban Village (Kelurahan)

Sub Hamlet Group (RW)

Neighborhood Group (RT)

Households (RT)



Engagement to develop equal relationship

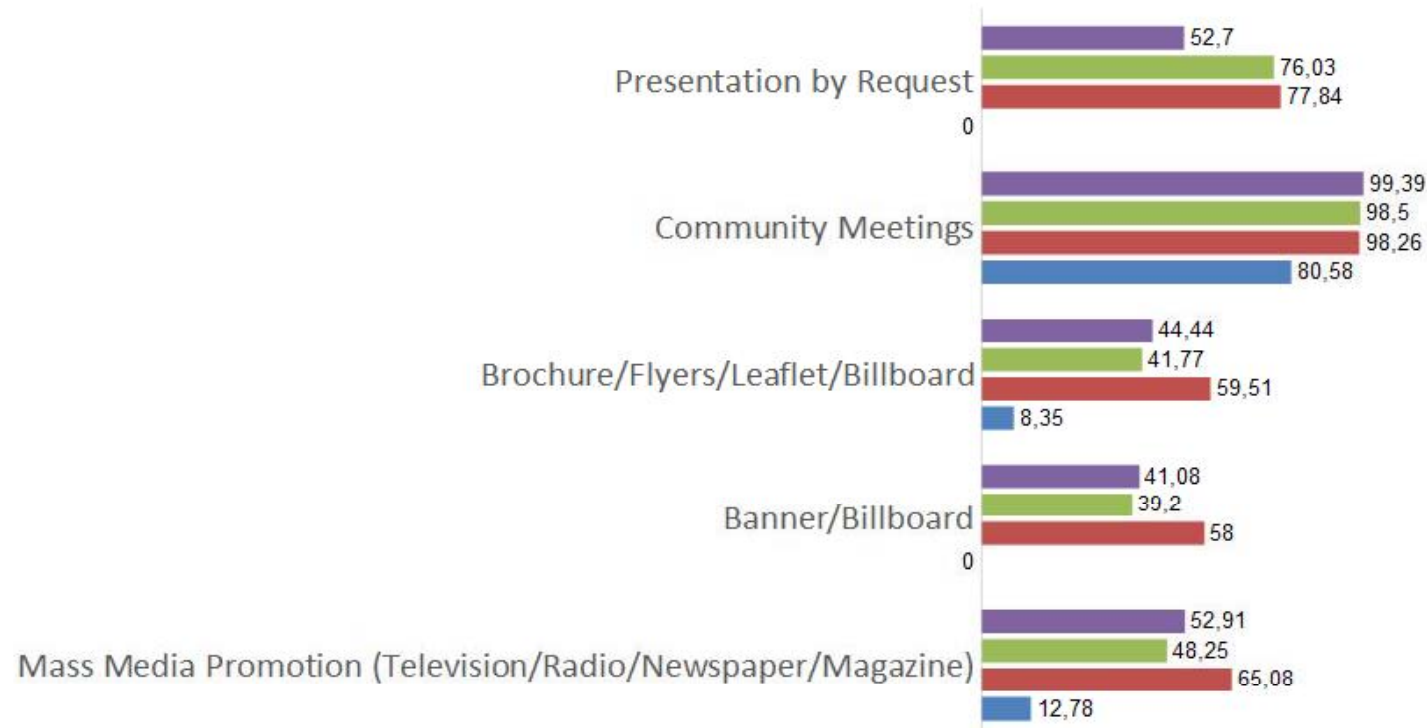




Understanding communication preference

Which communication methods do you prefer to use to know about EDP Yogya ?

■ Baseline (2015) ■ Mid Term 1 (Mid 2016) ■ Mid Term 2 (End 2016) ■ Mid Term 3 (Mid 2017)





Community Reference Group

- Using community structure and mechanism
- Consult, communicate, and collaborate in decision making process
- 50 CRG





Pitpaganda

(Bicycle Movement Advertisement)

- Environment friendly
- Small street-friendly
- Giving ED experience to community
- Since 2016, has conducted 86 rounds to community





Community outreach

Sekaten Cultural Event Kota, Nov 2017



*ED Community Champions Involvement,
Nov 2017*





EDP at Hari Kesehatan Nasional Carnival, Nov 2017



*Palm Kids Kindergarten
Children learn about Mozzzy, Nov 2017*



Woly in Merti Code River, Nov 2017
Commemorating Merapi Eruption



Sumpah Pemuda, Oct 2017
Fun Walk with Community

Stakeholder inquiry system



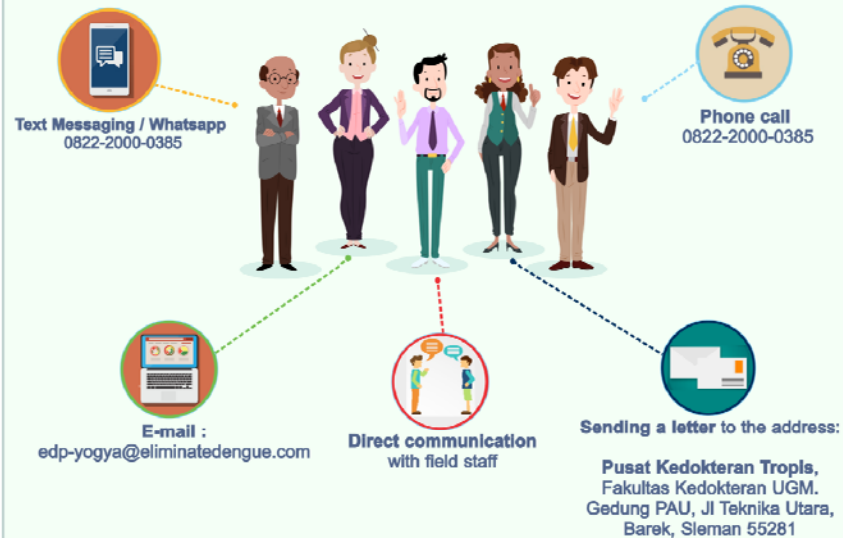
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STAKEHOLDERS INQUIRY SYSTEM (SIS)

REPORTING PROCEDURE

Stakeholders Inquiry System (SIS) is a communication platform between stakeholders and program implementer whereby the stakeholders can report any issues (**request, complain, question**), that will be followed-up and recorded as a database.

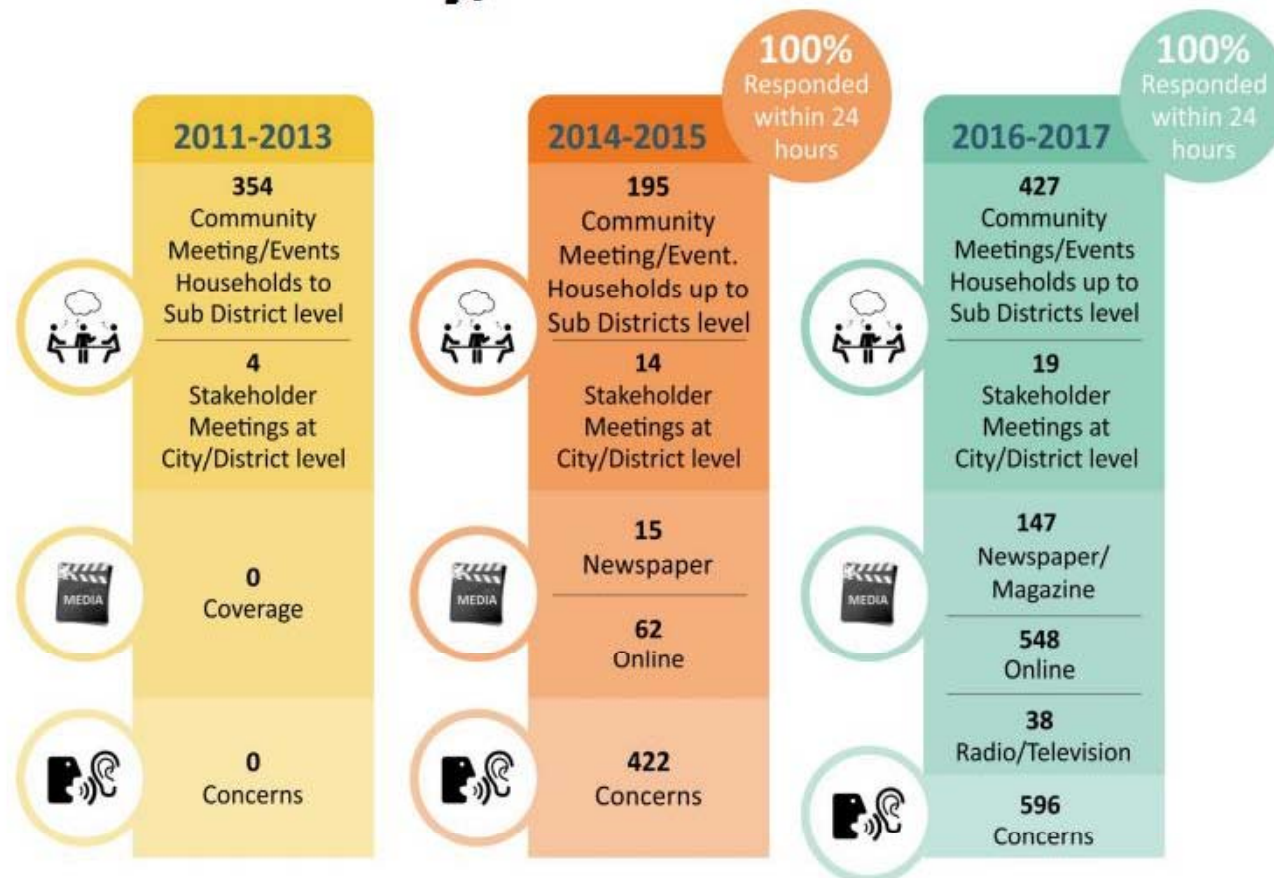
All the issues can be reported through these following manners:



Intensity of engagement activities



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Results

- All communities collectively gave approval of wolbachia deployment
- No resistance and opposition
- Strong ownership of the project
- Improve community pride
- Wolbachia as community "new identity"





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