



REGIONAL OFFICE FOR THE AMERICAS

"Promoting environmental health to human health"



# FINAL REPORT

## FOCUS GROUPS STUDIES on the Zika Virus Disease and complications associated with Zika

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**DOMINICA, October 2016**



## Executive Summary

### KAP Study in Dominica – 10/12 October, 2016

**Ethical consents:** October 6<sup>th</sup>, National from National Research Ethics Committee and Informed Consent Form signed by each participant and students’ parents/responsible

**5** target populations: householders, farmers, health workers, and fishermen (adult population – men and women >18), and school children (ages 14-19).

**7** focus groups in **4** different locations across the country: Portsmouth (2), Marigot (1), Roseau (3), Soufrière (1)

**Instrument:** discussion guide based on WHO KAP Resource Pack

**Objective:** To better understand how individuals interact with mosquitoes and are prevent contact to avoid the risk of contracting Zika and other diseases such as Dengue and Chikungunya.

### Key Findings:

- Participants, live with different types of mosquitoes on a daily basis, however, only a limited amount of participants had a clear idea that the same type of mosquito transmits Zika and Dengue, others had difficulties identifying the *Aedes* mosquito as the one responsible for diseases such as Chikungunya, Dengue, and Zika, and Some participants were not familiar with the life cycle or typology of the *Aedes* mosquito
- Beliefs among participants include: transmission of Zika and Chikungunya through air and possibly coming from other sites or countries and mosquitoes forming part of a conspiracy theory or being caused by a problem in the environment. Lastly, all participants believed in transmissions of Zika and Chikungunya.
- Most of the participants demonstrated little knowledge in terms of the complications and risks associated with Zika. They had little to no knowledge on microcephaly, what some referred to as “babies with small heads,” blood transfusions and sexual transmission. The little knowledge that they did demonstrate was from being able to compare this disease with Chikungunya and Dengue, but nonetheless have become more relaxed.



## Key Recommendations:

- Provide specific information and develop messages on the different types of mosquitoes in the island—*Culex* versus *Aedes*, their behaviors, breeding sites and feeding and emphasize the importance of vector control while keeping in mind that the complete elimination of mosquitoes is not an ecologically safe option.
- Provide more communication and education on symptoms for Zika and Guillain-Barre. Increase outrage communication, placing more emphasis on the complications and their impact on future generations, and development of a specific campaign on sexual transmission and sexual reproductive rights, specifically the role that health care workers play on pregnant women during prenatal consultations.



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### **Background**

The WHO Director declared on 1 February 2016, “the recent cluster of microcephaly cases and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constitutes a Public Health Emergency of International Concern”. The Caribbean region has not been spared by this new epidemic. Even though the number of laboratory confirmed cases is still low in this part of the World, evidence suggests a wide geographic distribution of *Aedes* species mosquitoes responsible for the transmission of Zika, Dengue and Chikungunya throughout the Caribbean. Although there is increasing evidence of the link between Zika and the cluster of microcephaly cases and other neurological disorders, the emphasis of the Caribbean Small Island States has been on mosquito control and the protection of vulnerable groups. Increased mosquito control activities and public campaigns have been implemented including clean up campaigns and information messages, as well as a small insufficient distribution of bed nets to pregnant women. This focus on mosquito control has the added benefit of impacting not only on Zika transmission, but also on Dengue and Chikungunya transmission, both of which are endemic in the Caribbean. The impact of a reduction in transmission will not only affect the countries themselves, but also will impact on the global circulation of the virus, due to the high number of tourists that visit the Caribbean on a yearly basis.

The UK Department for International Development (DFID) is supporting the Caribbean, through PAHO/WHO, in responding to the Zika outbreak. As a component of the DFID funded project, the impact of the public awareness campaigns and messages are to be measured, through the implementation of a Knowledge, Attitude, Behavior and Practice (KAP) study. This will be done at the start of the project and then again at the end once the materials developed as part of the project have been rolled out. This will not only guide the messaging, but also the social mobilization and community engagement activities.



## Summary of activities

Prior to the fieldwork that was done in four different sites of Dominica, the qualitative research – KAP Study received consent to be conducted by the National Research Ethics Committee on Thursday, 6 October 2016.

Observatory visits around Roseau, the capital of Dominica, were performed in order to gain a better understanding of the local language and culture.

On October 10th and 11th of 2016, the Pan American Health Organization (PAHO) along with local Environmental Health Agents from Dominica conducted seven focus groups with five different target audiences: householders, farmers, students, health care providers, and fishermen.

On October 10th, a total of three focus groups were conducted. Two groups were held with householders; 10 - 12 people in each, in Portsmouth — northwest of the country and 2<sup>nd</sup> largest city. The remaining group was held with farmers from Marigot — northeast of the country, a village with >2,500 inhabitants.



On October 11th, four more focus group were conducted with two group of students between the ages of 14 and 19, and Health Care Workers from Roseau—central west coast and capital of the country with >16,000 inhabitants. An additional focus group with fishermen was conducted in Soufrière—southwest of the island, a village with > 1,400 inhabitants.

All participants were given Informed Consent Forms to sign prior to the beginning of each session. Students brought and turned in the Informed Consent form signed by their parents and/or the adult responsible for them.

Reports for each focus group with descriptive notes were written every day after fieldwork was completed.

Lastly, on Oct 12th a meeting was held with local Environmental Health Authorities and local PAHO officers at the PAHO Office for the purpose of providing information from the preliminary findings of the Knowledge, Attitude and Practices (KAP) study on Zika and mosquito control and prevention.



## Main findings

### Human beings and nature

- **Dissociation:** Participants classified as householders, farmers and fishermen were among the group that had a stronger dissociation when speaking on the mosquito's ability to cause diseases and interact with humans – *“how this small little thing can do that?”*. Furthermore, there was a strong disbelief in the mosquito's ability to transmit harmful diseases that could cause severe damages on humans.
- There was a disconnection of knowledge between adult mosquitoes and larvae
- No dissociation was present in student and health workers.

*It's hard to accept that the mosquito can transmit Chikungunya. The Health people had a hard time convincing people that mosquitoes could cause Chikungunya.*

Group A – Householders, participant # 8

*I don't believe it's the mosquito because what are the symptoms, why is it the same mosquito?*

Group E – Fishermen, participant # 5

*A little mosquito - (why a mosquito so small can cause so much damage).*

Group A.1 – Householders, participant

### Beliefs and Myths:

- Beliefs among participants include transmission of Zika and Chikungunya through air and possibly coming from foreign countries. A few participants expressed their belief of forming part of several conspiracy theories or being caused by a problem in the environment, not mosquitoes. One participant believed transmission was due to mosquitoes urinating and defecating in the water people drink. Lastly, all participants believed in transmissions of Zika and Chikungunya.
- No relationship between mosquitoes causing diseases was made.

*I do not believe it's transmitted by mosquitoes but something is in the air.*

Group B – Farmers, participant

*That new mosquito is coming from transportation from other islands.*

Group E – Fishermen, participant # 5

*(Overlapping conversation stating the mosquito was inoculated with Zika because the conspirators know that the mosquito is a very good carrier)*

Group B – Farmers, participant # 7



## Emergency Fatigue

Participants expressed a feeling of disappointment and powerlessness when confronting these diseases and precautions.

*The general public is laid back because of other diseases. We are used to diseases like Dengue, Chikungunya and Ebola. For the community Zika was not a big deal, and the information was there*

Group D – Health Workers, participant # 5

*I don't think so, because if it is transmitted by a mosquito how's it possible to prevent it, they fly all over*

Group E – Fishermen, participant

*Zika is a problem; it shows what a little mosquito can do. First, there was Chikungunya and since then there has been one thing after another.*

Group A – Householders, participant # 8

## Topics within the Discussion Guide:

### Mosquitoes and Chikungunya, Dengue, and Zika:

- Only a limited amount of participants had a clear idea that the same type of mosquito transmits Zika and Dengue. All others had difficulties identifying the *Aedes* mosquito as the one responsible for diseases such as Chikungunya, Dengue, and Zika. Since some participants are not familiar with the life cycle or typology of the *Aedes* mosquito, they expressed having little knowledge when identifying breeding sites. For example, they mentioned breeding sites as dirty water, river banks and sewage. Another misconception represented was the confusion between *Culex* and *Aedes* mosquitoes. Most believed that they had *Aedes* mosquitoes present in their homes because of the nocturnal tendencies such as only biting during the night and the distinctive sound they make, when in fact the *Culex* mosquito is the one who bites at night and makes noise.

*Control is important. People burn tires to kill mosquitoes.*

Group A – Householders, participant # 9

*Alamo (river that crosses the community that it considered to be very polluted) is a standing water and a mosquito breeding site, we need a big project.*

Group E – Fishermen, participant # 7



*I had Chikungunya before Zika, it's the mosquito at night.*

Group B – Farmers, participant # 8

### **Sanitation and garbage:**

- Although participants acknowledged that the Environmental Health Sector was doing a good job educating people, they said they lacked knowledge in sanitation and proper waste disposal practices. Participants also expressed concerns with the lack of reinforcement on current litter laws and the private garbage disposal business. There is a need of reinforcement on laws that are in place since not all members of the community do their part in taking the proper measures for reducing mosquitoes around homes and communities. This lack of reinforcement creates a problem for those who are doing their part because they cause mosquitoes to stick around. In terms of garbage disposal, they have created a business where community members pay 1 US dollar for garbage to be disposed but in reality the people taking the garbage dump it everywhere instead of disposing of it properly.

*The source of mosquitoes is the sanitation problem.*

Group A – Householders, participant # 9

*Households pay 1 dollar to take away the garbage and these people don't dump the garbage properly they just dump everywhere.*

Group A – Householders, participant # 8

*Taking care of the garbage and litter is the main priority. We need a special court for that.*

Group B – Farmers, participant # 11

*Garbage is the perfect place for mosquitoes, there is no garbage collection, and inconsistency is a problem*

Group C – Students, participant # 4

### **Responsibilities on Health and the environment:**

- A reoccurring theme among all participants was the role of the neighbor as an individual and in the community. All participants expressed the importance of each neighbors' role in taking the proper measures to avoid mosquito breeding sites and taking precautions to prevent contracting Zika. If neighbors don't do their part to control mosquitoes, then everything stays the same. Participants also emphasized the role of the government amidst the disease, stating that although some issues are concerned at the individual and community level, there are others at the governmental level. For example, the council is looking and organizing meetings as well as sending out letters to people who own vacant lots. Lastly, all participants agreed that each



individual is responsible for taking care of his or her health and maintaining sites clear of breeding containers for *Aedes* mosquitoes.

*There has been education and people are more aware, but if the neighbor doesn't clean then everything stays the same.*

Group A – Householders, participant # 4

*Prevention is difficult because neighbors need to do it*

Group B – Farmers, participant # 10

*Mosquitoes are there every day, so you need to do things every day, spray today, spray tomorrow, every day.*

Group E – Fishermen, participant # 7

### **Zika and its complications:**

- Most participants demonstrated little knowledge in terms of the complications and risks associated with Zika, which could be connected to the limited amount of information and transparency they are receiving. Some stated it seemed as if it was a secret. They had little to no knowledge on microcephaly, what some referred to as “babies with small heads,” blood transfusions and sexual transmission. As a result, all participants were unaware that 3 in 4 people would not develop symptoms associated with Zika but could still be infectious to others. Participants mentioned going to health centers only if they were feeling ill but would use home remedies if symptoms weren't severe. The little knowledge that they do demonstrate has come from being able to compare this disease with Chikungunya and Dengue, but nonetheless have become more relaxed.
- Only one group, students, was able to recognize sexual transmission as one of the first ways of transmitting Zika.

*They believed if you are a man or you are not pregnant, you don't have to worry about it.*

Group D – Health Workers, participant

*Protect yourself during sexual activity.*

Group C.1 – Students, participant

*Not everyone believes that it can be sexually transmitted and not everyone knew it can be transmitted from mother to child.*

Group A.1 – Householders, participants

*If you are sick and have Zika, you cannot transmit it sexually because when you are sick, you don't have sex.*



Group E – Fishermen, participant

**Trust and source of information:**

- The Ministry of Health was described as one of the only sources that participants could trust in delivering information and clarifying misinformation. The media could only be trusted if they played interviews or featured health authorities, otherwise, it was only something to listen to and the information needed be fact checked.
- The presence of environmental health inspectors or personnel was highly requested in the communities.

*Ministry of Health, Health Inspectors/Personnel, Doctors and nurses*

Group C – Students, participants

*Health people, doctors*

Group C – Farmers, participants # 10, 11, 6

**Water storage and vector control:**

- Common vector control methods among participants include the use of nets, screens, bleach (Clorox), coils, baby oil, burning bushes and tires, throwing out water, and covering drums or containers. Farmers in specific mentioned the use of mosquito proof drums and kerosene to block mosquitoes from laying eggs. Lastly, all participants mentioned storing water in their homes, few were fortunate enough to have it come from the faucet, and all participants collected rainwater to use in their gardens and clean their homes.

*Drum, Clorox, keep clean water in bins, clean the big containers then cover.*

Group A – Householders, participant # 2

*I collect rainwater when there is heavy rain (due to infrastructure problems there is a shortage of water after tropical storms) but then I throw it away.*

Group E – Fishermen, participant # 7

**Control and preventive measures: individual and collective**

- Participants commented on government control measures that were not as effective or done on a regular basis. Fogging was one of the measures that were criticized since effects were only temporary and the method was done by trucks that sprayed outside rather than by foot where people could spray inside homes. In respect to fogging, students and healthcare workers had concerns on the long terms effects that could come from the chemicals in fogging.



- Other preventive measures that were mentioned included: burning tires to kill mosquitoes, avoiding bites, and using tires as flowerpots in their landscape as a measure of preventing breeding sites in tires.
- There were some contradicting views in terms of preventive measures that included covered clothing and repellents. Some commented on the difficulty of using covered clothing, especially for those who work outdoors, stating that long pants and long sleeves can be a hassle while some mentioned they use this method. Others believe repellents are ineffective when it comes to prevention, while others use this technique regardless.
- Common methods inside the home include the use of citronella, mosquito coils and oils, zapping and bats (a tennis racket with electric cords) that kill mosquitoes.
- Although efforts have been made, participants stated mosquitoes continue to stick around leading to inaction and creating a sense of inevitability.
- Preventive measures are also dependent on cultural backgrounds such as work and where they live. For example, those living in cities have a tendency to use repellents and bug sprays while those who live in villages (farmers) use natural remedies and what's provided by nature.

Some participants placed most of the responsibility on health authorities and believe they should do more in terms of education and preventive measures. Complaints were also made about the absence of personnel and the need for the physical presence of personnel, not just information and messaging.

#### *Long sleeves*

Group D – Health Workers, participants and Group C1. – Students, participants

*Keep the environment clean and closed (the household), spray, make sure the windows are screened. I can't take care of the mosquitoes outside but I can take care of the mosquitoes inside my house. The use of long pants and sleeves is not going to happen.*

Group E – Fishermen, participant # 7

*I kill mosquitoes – I use the racket when I am watching TV, and I also use coils. If you kill them, then others do not come back.*

Group E – Fishermen, participant # 4

*Shock mosquitoes, zap them with tennis rackets.*

Group C – Students, participant # 5

*Environmental officers should do more surveillance, check in, inspections.*

Group B – Farmers, participant # 10



## General Recommendations

- Provide specific information and develop messages on the different types of mosquitoes in the island — *Culex* versus *Aedes*, their behaviors, breeding sites and feeding and emphasize the importance of vector control while keeping in mind that the complete elimination of mosquitoes is not an ecologically safe option.
  - o Information and messages could be integrated in school curriculums (biology and integrated science studies), for example, kids can share the new information they learned with their parents when they go home
  - o Develop videos showing mosquito life cycles
  - o Brief and inform teachers on the different types of mosquitoes in the island, specifically the *Aedes aegypti*
  - o Segment target audiences and place emphasis on adults, not just school aged children
- Include questions on mosquitoes and their life cycle for future focus groups.
- Increase community and social mobilization engagement (face-to-face meetings). People want to discuss beliefs, practices, and attitudes with Environmental health officers.
- Brief and persuade local government personnel such as council members and community leaders on what their role is to contribute to vector control and prevention efforts of the disease and its complications.
  - o Rebuild the sense of community along with other sectors. We all have a role to play and hold the collective responsibility to take action
  - o Example: **I am the neighbor** Campaign – tackling the issue of blaming neighbors for not taking action
- Provide more communication and education on symptoms for ZIKA and Guillain Barre.
- Increase outrage communication – their risk perception is lower than the risk. More emphasis should be placed on the complications and their impact on future generations.
- Development of a specific campaign on sexual transmission and sexual reproductive rights, specifically the role that health care workers play on pregnant women during prenatal consultations.
- Innovative measures, coalitions and partnerships should be formed in order to address garbage and waste disposal problems on the island.
  - o I.e. Reduce/ Reuse/ Recycle campaigns
- Provide better information on environmental laws that exist in the country in order to prevent littering and blockage of drains. Council members should be more informed regarding these laws and should play an active role in reinforcing them.
- Maintaining the levels of credibility and trust of the Ministry of Health and Environmental Offices when delivering information to the public at large.



- Develop key messages and talking points to keep a One Voice approach
- Keep health personnel updated
- Create a space and opportunities for constant listening and clarification of information and rumors for environmental offices.
- Expand actions related with mosquito proofing water drums. This method was used during Dengue and Chikungunya outbreaks and everyone who has used this system has been satisfied and continues to incorporate it.
- Continue to disseminate information from different channels even though the epidemic peak has passed.
- Start working in programmatic communication instead of emergency and risk communication.
- When possible, use local language when communication in order to fit in with the culture and their use of language. For example, some may use “small heads” to refer to microcephaly, “designed mosquitoes” for *Aedes aegypti*, and “worms” for larvae.
- Overall, draft Frequently Asked Questions regarding disbeliefs, common misconceptions, and myths found in the focus groups.
- Give incentives for the use of nets and installation of screens in homes.



## Research design and focus group discussion guide

### Operational Research: Focus group

**Main Objective/Key Purpose:** PAHO/MOH-Dominica is carrying out a qualitative study based on focus group to better understand how individuals are interacting with mosquito and are preventing contact to avoid the risk to contract Zika and other diseases as Dengue and Chikungunya.

### Key Research Question/Problem:

- *How (in what way) attitude/knowledge and practices are preventing individuals in Dominica to become self-efficient/empowered to protect themselves against Zika and take preventive measures in and around the house at least once a week in order to reduce vector source/breeding sites?*

**Methodology:** Focus Group. 5 will be considering this target population: householders, fishermen, farmers, health workers (adult population – men and women >18), and school children aged 12-18. The Focus Group will be held, 2 or 3, at the North of the island and 2 or 3 at the South of the Island.

**Questions:** WHO KAP Resource Pack (Question Bank)

**Consent Form:** MOH-Dominica will be collecting the consent forms in advance from all participants, including parents.

**Sign-In Sheet:** Few demographic questions about participants will be asked in a form (gender, age, highest level of education attained, number of pregnant women in household, number of women aged 15-49 years, location of household, distance to nearest healthcare facility, current work/employment status, and average monthly income of household).

**Evaluation Sheet:** At the end of the group discussion, each participant will be asked to fill out an evaluation form that will be anonymous (no identification). Participants will rank from 1 (low) to 5 (high) the facilities and accommodations, refreshments, flow of the discussion, importance to be part of a focus group, and to give additional information if they did not get to say during the discussions.



## Steps on conducting Focus Group (for all groups)

### Introduction:

- ✓ Name of the Facilitator and her/his assistants (note takers) and external observers
- ✓ Facilitator thanks all participants to come to share their opinion with MOH and Environmental Health Department, and explains that the focus group is not to achieve consensus rather gathering thoughts, ideas and information

### Presenting purpose:

- ✓ Facilitator emphasizes that participants are here today to talk about mosquitoes and practices/barriers that could avoid contact between individuals and mosquitoes. There is no right or wrong answer to any of the questions asked
- ✓ Facilitator also emphasizes that we would like to listen and understand participants' perspectives on how to protect themselves and their families from being at risk to contract Zika and diseases such as Dengue and Chikungunya

### Presenting procedures:

- ✓ As explained during the invitation process, Facilitator reminds participants that the research team is taking notes and audio-video recording the group discussion in order not to miss anything participants say. Facilitator also reminds participants that the information provided by them is confidential and will not be associated with anything they say during the focus group dynamic
- ✓ The meeting is to last one hour
- ✓ The focus group is an open discussion. Facilitator orients participants to feel free to respond without waiting to be called on, and says that it is appreciated, however, if only one person talks at a time
- ✓ Because there is a lot to be discussed and time goes quickly, the Facilitator informs participants that she/he may change the subject or move along sometimes
- ✓ Facilitator makes sure all participants turned off cell phones and tablets

### Ice Breaking – Participants introduction:

- ✓ Before the discussion begins, facilitator asks if participants have any questions
- ✓ Facilitator asks participants to introduce themselves very briefly: name and daily activities to make a living



### **Building connection with participants:**

- ✓ Facilitator motivates participants for the discussion about mosquitoes in general, *Aedes* mosquito in particular, source/breeding sites, Zika, diseases such as Dengue and Chikungunya

### **At end of the session:**

- ✓ Facilitator shows/hands out/distributes leaflets/pamphlets to participants (education material about diseases and vector control)

### **Preparing Closure:**

- ✓ Facilitator wraps up the relevant topics that came up. There were many contributions during the meeting. It appears that \_\_\_\_\_ are some of the barriers preventing us to take care of source/breeding sites of *Aedes* mosquito. It appears that \_\_\_\_\_ could be considered a key issue that is blocking preventive measures to be more consistent and frequent.
- ✓ Facilitator makes sure participants shall comment, add, and clarify about what was said as the wrap up for the meeting. Facilitator should ask if there were anything else, participants would like to say.

### **Closing the meeting:**

- ✓ Facilitator thanks every one for coming to the meeting and sharing thoughts and opinions. Facilitator also emphasizes how the time was appreciated and how helpful the opinions and comments were.
- ✓ Facilitator reminds participants not to leave without filling out the anonymous Evaluation Form.

## **Discussion Guide: *main, follow up and probing questions***

### **Attitude about Zika**

1. *In your opinion, is Zika an important issue / problem in your community?*

Follow up: *If YES or NO, could you explain to us why?*

2. *In your opinion, whose responsibility is it to prevent you / your household / your community from getting Zika?*



Probe: *Is it a sole individual responsibility or a community and government responsibility as well? Could you explain to us how do you see it?*

### **Knowledge about Zika**

3. *Do you know anybody who has gotten Zika in your community / local area recently?*

Follow up: *If YES, could you tell us what happened? If NO, emphasize on the next question.*

4. *Do you know how a person gets Zika?*

Follow up: *Besides (example) mosquito bites do you know a person can get Zika from different ways including sexual transmission? (Example: transmitted from sexual intercourse, from blood transfusion and from mother to child transmission)*

Probe: *Do you know other ways a person can get Zika?*

5. *In your opinion, can you prevent Zika?*

Follow up: *If YES, could you share with us any ideas of how it is best to prevent Zika?*

Probe: *Besides (example) removing standing/stagnant water, there are many other ways to prevent Zika. Can you tell us more about preventive measures? (Examples: mosquito nets during the day, repellents or sprays, covering clothes, clean/scrub water storage containers, spray or fumigate, use larvicides, screens on windows and doors, clean household environment).*

Follow up: *If NO, could you explain why you say that?*

6. *Who / what do you most trust to give you accurate information about Zika?*

Follow up: *Could you tell us why you think these sources have been effective?*

Probe: *Besides (example) television, social media and traditional healers, are there any other sources of information you trust to keep you informed about Zika? Can you name one or two?*

### **Practices about preventing Zika**

7. *Have you taken any action to prevent yourself and/or your family from getting Zika since you heard about it?*



Follow up: *If YES, could tell us waht are they? (Examples: mosquito nets during the day, repellents or sprays, covering clothes, clean/scrub water storage containers, put covers over water sources/ storage units/ water containers, spray or fumigate, use larvicides, screens on windows and doors, clean household environment).*

Probe: *Besides (example) repellents or sprays and fumigating, do you put covers over water sources and/or do you use mosquito proof water drums? Are you willing to do it?*

8. *What challenges / difficulties did you face in taking action?*

Probe: *Could you tell us more about difficulties? (Examples: money, time, resources, information, criticism from people around you).*

Follow up: *Could you tell us why you have NOT taken any action to prevent yourself and family from getting Zika? (Example: I am not at risk/my household is not at risk; I don't mind if I get Zika; Preventing Zika is not a priority for me; Other people are doing what is necessary to prevent me from getting Zika; I don't have the resources or access to preventive measures; I don't know how to prevent getting Zika; and the government is already doing the job).*

9. *How can you reduce or remove mosquitoes from your house / compound?*

Probe: *Could you tell us more? (Example: burn mosquito coils or fires, use mosquito proof water drums, clean/scrub water storage containers, put covers over water sources/ storage units/ water containers, spray or fumigate, use larvicides, screens on windows and doors, clean household environment).*

10. *Before Zika, could you tell us what you routinely do to avoid mosquitoes in and around the house?*

Follow up: *Could you explain to us why you do it?*

11. *Let's talk about water storage. When did you last clean / scrub your water source / storage unit / water container(s)?*

Probe: *Time (never did it, last week, two weeks ago, one month ago, 2-6 months ago, 7-12 months ago)*

12. *Continuing talking about water storage. How did you last clean and protect your water source / storage unit / water container(s)?*



Probe: *Procedure/Method (emptied some or all of the water and refilled it; emptied the container and scrubbed it with soap or other solution before refilling it; put cover over the water source / storage unit / water container(s); added solution or chemical to the water; applied procedures to clean mosquito proofing water drums)*

13. *In your opinion, what are the top three ways in which people can be encouraged to better protect themselves and their communities from getting Zika or to lower the risk of getting Zika?*

Probe: *All participants will be encouraged to name 3 ways (can be just words or a complete idea)*



## Focus Groups Transcripts

### Group A – Householders

#### RFA Hospital Portsmouth – Conference Room

**Facilitator** – Monica Prado, PAHO consultant

**Assistants** – Clement Marcellin (Senior Environmental Health Officer) and Kafi Valerie (Environmental Health Officer) from the Portsmouth District as part of the Environmental Health Department.

The Focus Group was conducted from 10:30 in the morning until 12 in the afternoon. The group was comprised of 10 householders, five men and five women, from the communities of Penville, Dublanc, Cottage, Thibaud, Lagoon and Portsmouth, all of which form the entire district. Participants were invited by the Environmental Health Office in the District of Portsmouth. All participants signed the Informed Consent Form prior to beginning the session.

Ferdinia Carbon, the Chief Environmental Health Officer, gave an introduction at the beginning of the session and explained the intent of the group discussion as well as the expected outcomes of the exercise.

She explained the objective, which was to come together and discuss the impact Zika has on communities and the overall perceptions participants have in relation to the manner in which health authorities are managing the disease and preventive measures. She also emphasized that the outcome would enable the Environmental Health Department to improve their overall efforts in reducing *Aedes aegypti* mosquito breeding sites. Furthermore, it was also stated that drums are the most prolific breeders on the island and efforts are being made to address this issue.

Ferdinia Carbon left the room and was accompanied by Cristina Mana, PAHO Project Leader, in order to conduct the second focus group held in Portsmouth with householders.

The focus group continued, the group started with a prayer and followed with a discussion that was accompanied by a prepared guide. The facilitator emphasized that participants would be called by the numbers placed in front of them and that the recording was just for accuracy purposes. Participant number 8 left the group early due to an urgent call. Lastly, because of time constraints, the focus group was delayed for 30 minutes due to traffic and mobility from one city to another. Some questions were merged or skipped in order to keep the flow of the conversation.



## Description: key points of each participant

### Question # 1 (is Zika a problem?)

**8:** The recording of cases is important as well as the issues on waste disposal. Zika is a problem; it shows what a little mosquito can do. First there was Chikungunya and since then there has been one thing after another. The information is not really working because people are not acknowledging it, people still throw things and don't cut the grass.

**3:** Cleanup campaigns, collection of waste, and covering water drums are all important.

**9:** Zika is caused due to poor sanitation measures. We must identify breeding sites, not just for *Aedes* but for mosquitoes as a whole. Businesses and the government are transferring work. Fieldwork needs to be done properly but some lack fieldwork because of gender issues. Mosquito breeding is generally caused by the privatization of vector control which is a step behind. The source of mosquitoes is the sanitation problem.

**6:** Education is needed; people don't know where mosquitoes breed.

**1:** Where does the mosquito come from? Where do they live?

**10:** We are not poor, but we need to be healthy. There is improper disposal of waste.

### Question # 2 (who is responsible for prevention?)

**8:** Everyone is responsible, but each individual holds a higher responsibility. There is a need of individual pride which does not exist in Portsmouth in the sense of keeping the environment clean. There is a need to teach people and have massive education going to homes, and there needs to be an education drive.

**7:** Education, if people don't respond, they need to find another way. Legislation, penalty and reinforcing the law. People need to know the laws, inspectors at homes should educate others, and the next step should be applying the law.

**5:** There are litter legislations; the problem is the lack of reinforcement. Who are the ones policing the environment – the litter orders?

**2:** The council has been addressing this issue: the vacant lots, the grass, and asking for cleaning.

**7:** The council is looking and organizing meetings and sending letters to people with vacant lots.

**9:** Leaders need to take care of controlling mosquitoes.

**8:** I am passionate about the environment and we are discussing the Papal Encyclical – Common Earth. But there is a problem, in a small town people know each other and nobody wants to hold the other accountable. Some dump near the cemetery. Households pay 1 dollar to take away the garbage and these people don't dump the garbage properly they just dump everywhere.

**4:** There has been education and people are more aware, but if the neighbor doesn't clean then everything stays the same.



**Question # 3 – 5 (who you know had Zika? – explain what happened) – 4 (how do you get Zika?)**

5: Health did a good job, but Zika was almost a secret. What's wrong with telling people where the suspected cases are? Local treatment and true statistics are needed. People had Zika and people started using local medicine.

10: Mosquito? Can this little thing do that?

9: The mosquito is the same as the dengue mosquito

**Question # 5 (can you prevent Zika?) – 6 (trust and source of information)**

8: Generally people know that it comes from mosquito bites. It's hard to accept that the mosquito can transmit Chikungunya. The Health people had a hard time convincing people that mosquitoes could cause Chikungunya.

2: Mosquito bite?

5: For the other part of the mosquito transmission, they go to health centers and talk about sexual transmission, but others experiment on their own.

2: what kind of mosquito?

7: If you are outside, they bite you. You are seriously affected by the mosquito.

9: Mosquitoes come from other people's homes (neighbors), this is why it's important to spray.

8: Focus on what time is the best time to clean.

**Question # 7 (actions to prevent Zika)**

9: Don't privatize public health functions, vector control through spraying. Stop commercializing.

8: High authorities are the decision makers. They need to know.

2: Haven't heard about spraying for a long time.

6: Smoke.

9: Fogging is a business, but it's just to kill the adult mosquito. For the breeding sites there is a need for regular research. Getting rid of breeding sites.

5: People are giving up on prevention. Chikungunya was destroyed but with Zika, people are more relaxed.

**Question # 10 (before Zika, measures to avoid it in the house)**

2: Just keep the environment clean.

1: What should I know about the mosquito? Where do they come from? Because, maybe the problem it is in ponds, bushes, and lagoons.

7: People died with Malaria and Yellow Fever because they were not responsible. The government and people were not conscious about the environment. People are not responding, during Chikungunya they felt it. People respond when they are more affected.

9: Control is important. People burn tires to kill mosquitoes.



5: Focus and attention. People talked about babies with small heads.

**Question # 12 (cleaning frequency) – 13 (top three ways to protect yourself)**

4: Clean, cover, use Clorox, and coffee.

3: Clorox, cover.

2: drum, Clorox, keep clean water in bins, clean the big containers then cover.

1: practices on how to prevent are very familiar for Dominicans.

10: drums, cover, bleach, wash inside.

9: keep it clean, important to keep the original cover, the ban is a problem.

7: drum for the garden, oil, coil.

6: bins – cover, bottle upside down, Clorox.

5: the health model comes with pipes. Farmers are the big issue because they use big drums in the fields. Mosquito proofing water storage drums; farmer’s collection of rainwater.

**Wrap-up:** Facilitator thanked the participants for taking the time to assist in the focus group and shared 4 key points with the participants:

1. General information about mosquitoes, detailed information about the *Aedes* mosquito, which transmits Dengue, Chikungunya and Zika, the cleaning process and proper water storage.
2. Myths should be clarified in order to stop burning tires to kill mosquitoes.
3. Zika: the disease and any form of transmission.
4. Education on sanitation and the environment – specifically about garbage and waste disposal, including legislation and litter laws.

**Brief commentaries about the focus group**

The participants asked for demonstrations on mosquitoes and breeding. Only one participant received a meal due to the late arrival of refreshments. The participants did an oral general evaluation after the focus group.

**Group A.1 – Householders**

**Fisheries Complex – Conference Room**

**Facilitator** – Cristina Mana – PAHO Project Leader

**Assistant** – Ferdinia Carbon, Chief Environmental Health Officer

**Observers**—Diana Burnette and Chris Macellin

The Focus Group was conducted from 10:30 in the morning until 12 in the afternoon. The group was comprised of 9 householders, four men and five women, from the communities of



Penville, Dublanc, Cottage, Thibaud, Lagoon and Portsmouth, all of which form the entire district. Participants were invited by the Environmental Health Office in the District of Portsmouth. All participants signed the Informed Consent Form prior to beginning the session.

Ferdinia Carbon, the Chief Environmental Health Officer, gave an introduction at the beginning of the session and explained the intent of the group discussion as well as the expected outcomes of the exercise.

She explained the objective, which was to come together and discuss the impact Zika has on communities and the overall perceptions participants have in relation to the manner in which health authorities are managing the disease and preventive measures. She also emphasized that the outcome would enable the Environmental Health Department to improve their overall efforts in reducing *Aedes aegypti* mosquito breeding sites. Furthermore, it was also stated that drums are the most prolific breeders on the island and efforts are being made to address this issue.

The focus group started with a prayer and was followed with a discussion that was accompanied by a prepared guide. The facilitator emphasized that participants would be called by the numbers placed in front of them and that the recording was just for accuracy purposes. Lastly, because of time constraints, the focus group was delayed for 30 minutes due to traffic and mobility from one city to another. Some questions were merged or skipped in order to keep the flow of the conversation.

### **Description: key points from participants**

#### **Question # 1 (is Zika a problem?)**

- Disease that causes death is important
- Anything that affects health and wellness
- Zika that affects next generation
- Causes a burden in the budget of optimal health

#### **Question # 2 (who is responsible for prevention?)**

- Ourselves
- Me
- Neighbors
- Community
- Authorities - aspect of protecting people (areas that are not in control i.e. close to forests or abandoned houses/empty lots)
  - o Local government → village council each communication person



- Disposal of garbage (they don't want landfill)
  - o Garbage is everywhere (need to fix this and put it under control)

### **Question # 3 (who you know had Zika? – explain what happened)**

- People tackle the symptoms but they're not confirmed (they don't take blood from everybody)

### **Question # 4 (how do you get Zika?)**

- Not everyone believes that it can be sexually transmitted
- Everyone knew it could be transmitted through mosquito bites
- Not everyone knew it can be transmitted from mother to child
- They did not know about blood transfusion
- Employ children to do the job
- There's a need of more education and awareness
- A little mosquito- (why a mosquito so small can cause so much damage)
  - o some people don't believe that mosquitoes can transmit these diseases –
    - “a mosquito” can't do that
    - They thought about the air
    - Somebody put it there and they transmit
- Inappropriate disposal, they want to know how much this contributes to the disease
- They have a law but reinforcement is not good
- Program to collect bottles
- PAHO is giving some assistance to shred
- Solid waste
- Clean up empty lots (infrastructure)
- Old homes where water can collect
- Disagreement in the community (makes do not do things)
- There's no community spirit so they don't help
- Because of political disagreements
- [councils] twice – 2 year clean up
- People in the tourist industry (restaurants) don't have bins to throw trash away
- Reinforcement of the law
- People are too afraid to speak (they have to step up)
- Each person to be responsible for their garbage
- If you are in a bus you must have bins to throw things away
- Solid waste → private
- They were not paid so they stopped (Garbage)
- Each household has to pay to take away their garbage.
- Solid waste responsible for collection that does not say anything about it



### Question # 5 (can you prevent Zika?)

- Ministry of Health, not social media
- Schools – because they affect the next generations

### Question #6 (trust and source of information)

- Spray
- Long sleeve
- Clean up surroundings
- No pots in the rooms
- Cement
- Spray diesel in the house against mosquitoes (oil)
- Neighbors

### Question # 7 (actions to prevent Zika)

- Mosquitoes fly if it comes from the neighbor (2 people)
- Mosquitoes

### Question # 8 (difficulties to take action)

- Screen your home
- Empty any container
- Keep water covered
- Smoking (burning garbage)
- Old fashioned
- People say that lighting fire will blow mosquitoes away
- Burning plastic can cause cancer
- Air conditioning will keep them out
- Water proofing drums
- No one's using preservatives
- Pay people to kill mosquitoes with zappos- Mosquito zapping
  - o Program
  - o Stress reliever
- Insecticides kill other insects too
- Cover drums/ use bleach
- Drum is mosquito proofed
- If they're not using it

### Question # 9 (reducing mosquitoes)

- Clean very often
- Repellents , clothing (citronella)



- Follow the advice and put into practice the info you're receiving
- Protect yourself and your family
- Get to be each other's keeper because I'm cleaning my home and your neighbor isn't doing anything
- They don't use condoms

**Wrap-up:** Facilitator thanked the participants for taking the time to assist in the focus group.

### **Brief commentaries about the focus group**

The participants asked for demonstrations on mosquitoes and breeding. Only one participant received a meal due to the late arrival of refreshments. The participants did an oral general evaluation after the focus group.

## **Group B – Farmers**

### **Marigot Hospital – Main Salon**

**Facilitator** – Ferdinia Carbon, Chief Environmental Health Officer

**Assistants** – Kursha Augustine, Environmental Health Officer, from the Marigot District as part of the Environmental Health Department.

**Observers** – Cristina Mana and Monica Prado, PAHO-WHO

The Focus Group took place from 15:30 pm to 17:00 pm in the afternoon and was comprised of 13 farmers, 9 men and 5 women, from communities in the district of Marigot who were invited by the Environmental Health Office in the District of Marigot. All participants signed the Informed Consent Form prior to beginning the session.

Ferdinia Carbon, Chief Environmental Health Officer, gave an introduction at the beginning of the session where she explained the intent of the group discussion and the expected outcomes of the exercise.

The objective was to come together and discuss the impact Zika has on communities and the overall perception of the participants in relation to the manner in which health authorities are managing the disease and preventive measures.

**Note:** While the facilitator was explaining, one participant expressed he “did not know that Dominica had Zika.”



Ferdinia emphasized that the outcome would enable the Environmental Health Department to improve their overall efforts in reducing *Aedes aegypti* mosquito breeding sites. She also stated that drums are the most prolific breeders on the island and that efforts are being made to address the issue.

The focus group started with a prayer and followed with a discussion that was accompanied by a prepared guide. The facilitator emphasized that participants would be called by the numbers placed in front of them and that the recording was just for accuracy purposes. Participant's number 12 and 13 entered the group about 30 minutes late. The observers pointed out three detailed questions to the facilitator in order to clarify topics during the conversation.

### **Description: key points of each participant**

#### **Question # 1 (is Zika a problem?)**

Everybody agreed it was a problem.

#### **Question # 2 (who is responsible for prevention?)**

7: everybody, controlling mosquitoes is a government problem.

2: individuals must be responsible.

X: it can't be left to the individual alone, but also the Ministry of Health

X: the Ministry of Health

X: I think we should have laws

7: mosquitoes are flying around and I don't know about mosquito regulations

✓ Ferdinia gave information about the law

5: it is more effective if individuals control the mosquitoes. Babies with small heads

7: sexually transmitted, there is a conspiracy about mosquitoes

✓ Ferdinia informed that scientific information appoints to the mosquito

Xxx: they should create a budget

#### **Question # 3 (who you know had Zika? – explain what happened)**

X: it's important because you can get sick and it has to do with your health

(Everyone listened about the complications.)

5: small heads, image how it would be if all the babies in Dominica were born with small heads?

7: I do not believe it's transmitted by mosquitoes but something is in the air. It comes from imported distribution

3: I got Chikungunya, it was a more severe pain.

2: I got Zika, I felt very tired.

X: with Chikungunya you felt crippled, there was a lot of pain in the joints.



#### **Question # 4 (how do you get Zika?)**

**6:** mosquito bites

**X:** I do not know

**X:** through the air

**4:** sexual transmission

(3 participants agreed)

✓ Ferdinia explained sexual transmission

**6:** bodily fluids

✓ Ferdinia explained cases of Zika and pregnant women, 10 pregnant women and 2 babies

#### **Question # 5 (can you prevent Zika?)**

**X:** you can try to prevent Zika but you can't succeed, you also have to clean your backyard and drums

**X:** you have to ensure that your neighbor does so as well

**X:** we need to use long pants

**X:** repellents

(Overlapping conversation about the conspiracy theory)

**10:** prevention is difficult because neighbors need to do it

**6:** individual is part, using coils and oils

**11:** sexual transmission

**6:** absence of sex is the best way

**X:** put some oil in the corner of the room

**11:** sexual protection

#### **Question # 6 (trust and source of information)**

**11:** health people

**10:** health people

**6:** doctor

**5:** friends

**X:** doctor, it's my cousin

**X:** health care

(Overlapping conversation stating the mosquito was inoculated with Zika because the conspirators know that the mosquito is a very good carrier)

✓ Ferdinia talked about the conspiracy theory participant #7 brought up

#### **Question # 7 (actions to prevent Zika)**

**7:** I dump water, clean and cover drums

**11:** clean

**1:** spray the house to kill adult mosquitoes



- X: you are afraid to get it and you get the disease
- 2: repellents are not so effective
- 6: the company creates the disease so they can sell the repellents, making sales to companies
- 10: dump, diesel
- X: use of kerosene
- X: use of poison
- X: if you have a lot of leaves in your garden, what can you do? They breed in leaves and roofs, you can't do anything
- 6: cover
- 8: I had Chikungunya before Zika, it's the mosquito at night
- X: talk to the neighbors
- X: use long clothes
- X: put screens in the house

#### **Question # 8 (difficulties to take action)**

- 6: not enough treatment
- 10: I think that they are not doing enough chemical treatment
- 6: we need more talks and you should be talking to more people. More education.
- 7: need to sensitize, need to threaten people, and work on fear
- 10: environmental officers should do more surveillance, check in, inspections
- X: we should get more notifications
- 6: more reinforcement of legal actions and waste management
- Xxx: we should do a top 10 competition for most beautiful land
- 10: garbage and rubbish
- 8: rubbish in the street is a big problem
- X: Dominica should work on waste management. This is nasty. Waste management is contributing to the problem.
- 6: litter act and reinforce laws
- X: this is a weak point. We need to reinforce regulations
- 7: collecting garbage is a problem, there is no schedule
- 11: taking care of the garbage and litter is the main priority. We need a special court for that.
  - ✓ Ferdinia explained there is a plan to create a special court for the environment
- X: 9 weeks without garbage collection in Marigot
- 11: build a garbage house, old containers
  - ✓ Ferdinia explained that old containers were suspended because of flies and rats
- Extra 1: problem with seeds and bags

#### **Question # 9 (reducing mosquitoes)**

- X: baby oil
- X: light incense inside the house



- X:** spray and leave the house for 20 minutes and then come back
- 6:** oils, the scent for the mosquito, no mosquito because of the scent
- 10:** lemon grass in the bush
- ✓ Ferdinia commented on insecticides
- X:** (plan, morning glory seeds)

**Question # 10 (before Zika, measures to avoid it in the house)**

- 6:** before Chikungunya and Zika, there was no scare. People were not scared because Dengue was endemic in Dominica and less severe
- ✓ Ferdinia commented that Zika is mild
- 7:** Chikungunya was severe
- X:** With Chikungunya, people were scared because they were almost crippled
- X:** Zika frightened me but Chikungunya was a worse pain

**Question # 11 (water storage)**

- X:** everyone has drums in the house and you have to clean and cover
- ✓ Ferdinia talked about making drums safe and mosquito proofing them
- 5:** I have a mosquito proof drum
- 7:** explained that water needs to be at a certain level
- ✓ Ferdinia explained other projects for drums in Marigot and asked people to participate saying that the cost is 40 dollars
- 2:** I realized I was covering the drum but the mosquito was laying eggs and hatches later on
- X:** mosquitoes are too smart
- X:** If I see clean water and there are mosquitoes larvae in the water, I know there is no poison in the water.

**Question # 12 (cleaning frequency)**

- X:** bleach, wash, cover

**Question # 13 (top three ways to protect yourself)**

- 1:** prevent, spray, bed nets, and repellents
- 2:** spray at home to prevent mosquito breeding, screens on doors, wrap your body with your clothes
- 3:** spray the inside, use nets
- 4:** long shirts and pants, electrical zapping
- 5:** take care of drums, long sleeves, aerosol, spray
- 6:** cover drums, protection through proper clothing, sensitizing the community, reduce garbage
- 7:** I can't do anything to mosquitoes
- 8:** clean up surroundings, cover drums
- 9:** cleaning the surroundings, properly cleaning and covering drums, using repellents



- 10:** cover drums, repellents (spray yourself)
- 11:** cleaning drums, spray, coils,
- 12:** reduce breeding sites, bleach, sensitize, natural repellents
- 13:** take care of the rubbish, natural repellent, bed nets at night

**Wrap-up:** there was no wrap-up. The facilitator thanked everyone for taking the time to participate.

### **Brief commentaries about the focus group**

Participants did not comment on the focus group. All participants received a meal and refreshments. The participants did an oral general evaluation after the focus group.

## **Group C – Students**

### **Roseau – Conference Room – Dominica Public Place Union**

**Facilitator** – Sylvester St. Ville, Environmental Health Officer

**Assistants** – Clara Charles and Calma Louis, Environmental Health Officers

**Observers** – Cristina Mana and Monica Prado, PAHO Office

This report serves to outline the focus group conducted by Sylvester St. Ville, which was conducted from 9 to 10 in the morning. There were a total of 10 student participants; two young men and eight young ladies, aging from 14 to 19 years old (two 16 year olds, three 18 year olds and three 17 year olds) from three schools in Roseau: Dominica State College, Wesley High School and Convent High School. The participants were invited by the Environmental Health Office in the District of Roseau. All of the participants brought the Informed Consent Form signed by their parents prior to the beginning of the section. The students were divided into two groups.

Ferdinia Carbon, Chief Environmental Health Officer, gave an introduction at the beginning of the section and explained the intent of the group discussion as well as the expected outcomes of the exercise.

She explained the objective, which was to come together and discuss the impact Zika has on communities and the overall perceptions participants have in relation to the manner in which health authorities are managing the disease and preventive measures. She also emphasized that the outcome would enable the Environmental Health Department to improve their overall



efforts in reducing *Aedes aegypti* mosquito breeding sites. Furthermore, it was also stated that drums are the most prolific breeders on the island and efforts are being made to address this issue.

Lastly, the focus group began with each student introducing themselves and was followed by a discussion guide conducted by the facilitator, Sylvester. The facilitator emphasized the recordings were just for accuracy purposes. An observer pointed out one detailed questions to the facilitator in order to clarify topics during the conversation.

### **Description: key points of each participant**

#### **Question # 1 (is Zika a problem?)**

**4:** yes, Zika is an important issue. It is very difficult to overcome.

**1:** I'm afraid to have it

**2:** the media portrays it as something that has never been seen before but also not as bad as other diseases

- ✓ Sylvester asked if somebody had ever had Zika. The group answered that no one had ever had it.

#### **Question # 2 (who is responsible for prevention?)**

**3:** Everybody's responsibility – individuals

**1:** No individual in specific, individual are responsible for sharing information with others

**7:** Everybody has a role and one of them is to keep the environment clean

- ✓ Sylvester asked how the virus is transmitted and based on number # 2 answer, the facilitator rephrased and explained mosquito bites and blood meals. To motivated participants, Sylvester asked specific questions:

What is the role of the Ministry of Health?

- **2** – information,
- **6** – schedule, agenda for garbage collection and inspection,
- **8** – surveys to investigate mosquitoes,
- **9** – garbage collection

What is the role of the community?

- **8** – clean up, organize, have an agenda for collection

#### **Question # 3 (who you know had Zika? – explain what happened) – 4 (how do you get Zika?)**

**3:** yes, family and friends – headache, rash, my brother was so pitty

**1:** the rash

**2:** fever, rash – people at work



### Question # 5 (can you prevent Zika?)

**5:** yes, precautions about standing water. We can't really prevent it but we can take precautions

✓ Sylvester asked participants if it was possible to fight the battle against Zika:

**9-7:** No, not in Dominica

**7:** we have hard headed people

**8-6-9:** agreed

**9:** we do not cover

**6:** river –water in different areas cause the existence of breeding sites along the river

✓ Sylvester asked participants if the group had enough information:

- **9:** No

- **1:** we probably don't have much information but we need to listen to it, listen to the news and get information on-line

- **9:** send people to teach, send a team to reach out to the community

- **2:** using local radio stations

- **7:** flyers and billboards

### Question # 6 (trust and source of information)

The group listed: Ministry of Health, Health Inspectors/Personnel, Doctors and nurses

✓ Sylvester asked if anyone trusts the TV.

**4:** depends, if the Ministry of Health is saying something then it's okay, but they have dramatic information

**1:** Dramatic information helps people become aware, but it also depends on the channel

**2:** some information on the news was not correct

✓ Sylvester asked if anyone trusted the internet or the man on the street.

**5:** no, not really because we don't know who is talking

✓ Sylvester asked about the stories on Zika.

**9:** it will kill you

**4:** paralyzes you

**Xxx:** I was scared; this is why I listened to the stories

✓ Sylvester asked if anyone trusted the community. (Silence in the group)

✓ Sylvester asked; how do you inform yourself about Zika?

**1:** on line

**8:** newspaper

### Question # 7 (actions to prevent Zika)

✓ Sylvester asked about the barriers to prevent it yourself.

**9:** clean up the environment

**5:** clean the water



- 1: screens, bed nets, repellents (off), citronella, mosquito coils
- 4: long pants and sleeves
- 9: close windows after 6 pm, kill mosquitoes with a bat
- 5: shock mosquitoes, zap them with tennis rackets
- 8: bag the garbage

#### **Question # 8 (difficulties to take action)**

- 5: lack of consistency, you do it today but forget about it next week
- 8: you do but others don't
- 4: garbage is the perfect place for mosquitoes, there is no garbage collection, and inconsistency is a problem
- 9: dogs mess with the garbage because it's not collected
- 1: bats need to be cleaned because mosquitoes are small and can stay there
- 4: it's an issue to put a lot of clothes on, you are doing something and they aren't
- 9: rash, getting the rash
- 3: seeing everybody in pain
- 10: no reason not to get it
- 5: I didn't hear about a lot of cases so I wasn't concerned

✓ Sylvester asked if young people are concerned.

- 4: yes, symptoms, rash, young people are active people, they want to go places
- 2: getting pregnant
- 1: people that witness other people
- 7: not much concern
- 9: fear of other people, know about rash

#### **Question # 9 (reducing mosquitoes)**

- 7: nets on windows
- 4: bed nets
- 9: cover water
- 4: clear the gutters
- 8: ensure the neighbors do the same

✓ Sylvester asked, how do you address the neighbor so they can do the same?

- 9: talk to them
- 2: talk and explain
- 6: ask if they want to clean
- 1: make sure they understand how and what to do

#### **Question # 10 (before Zika, measures to avoid it in the house)**

- 1: nets on windows



3: mosquito coils

4: eliminate standing water

**Question # 11 (water storage)**

5: store water and wash drums

8: in my house we don't store water

**Question # 12 (cleaning frequency)**

9: every two months, drums every month

4: my mother does it, maybe every month

9: collecting water, my father is responsible

1: when they think it's needed

- ✓ Sylvester explained why it's true that containers need to be cleaned. They create mosquito breeding sites

5: flower plates, clean, scrub and put clean water

7: scrubbing, use bleach and water

**Question # 13 (top three ways to protect yourself)**

9: remove junk that can retain water

2: continue to inform people about the disease

6: using tires for landscaping

1: window nets and doors

3: use of pesticides

- ✓ Sylvester asked the position of the group. One said it was good but in excess and another said there are other ways to prevent without using pesticides

**Wrap-up:** The facilitator stated the group discussed issues associated with Zika virus and prevention. Rackets were the most used instrument among participants to kill mosquitoes. Other topics discussed included how to clean containers and drums and the dramatization by the media and how it can be good by making people more alert and active. The facilitator thanked everyone for taking the time to participate and reminded everyone to keep in mind that mosquitoes transmit diseases.

**Brief commentaries about the focus group:** Participants did not comment on the focus group. All participants received a meal and refreshments. The participants did an oral general evaluation after the focus group.



## Group C.1 – Students

### Roseau – Conference Room – Dominica Public Place Union

**Facilitator** – Ferdinia Carbon, Environmental Health Officer

**Observers** – Cristina Mana, PAHO Project Leader

This report serves to outline the focus group conducted by Ferdinia Carbon. During this session, there were 10 student participants from three different High Schools and one College in Roseau. The participants were invited by the Environmental Health Office in the District of Roseau. All participants brought the Informed Consent Form signed by their parents and turned them in prior to the beginning of the section.

Ferdinia Carbon, Chief Environmental Health Officer, gave an introduction at the beginning of the section and explained the intent of the group discussion as well as the expected outcomes of the exercise.

She explained the objective, which was to come together and discuss the impact Zika has on communities and the overall perceptions participants have in relation to the manner in which health authorities are managing the disease and preventive measures. She also emphasized that the outcome would enable the Environmental Health Department to improve their overall efforts in reducing *Aedes aegypti* mosquito breeding sites. Furthermore, it was also stated that drums are the most prolific breeders on the island and efforts are being made to address this issue.

Lastly, the focus group began with each student introducing themselves and was followed by a discussion guide conducted by the facilitator Ferdinia. The facilitator emphasized the recordings were just for accuracy purposes.

### **Description: key points of each participant**

#### **Question #1 (is Zika a problem?)**

- Not a big problem (3 responses)
- Only the rash (mild disease)
- Because of a few cases it's not a big issue
- They listened through the news
- The way it was communicated sounded more serious but not that bad

#### **Question #2 (who is responsible for prevention?)**

- Everyone's responsible
- (Me): its our role to keep ourselves safe



- Help each other
- Environmental Health should do inspections
- Public guidance
- People should clean up the community and environmental offices should inspect

### **Question #3 (who you know had Zika? – explain what happened)**

- Everyone got Zika from kids
- Just a rash and some fever

### **Question #4 (how do you get Zika?)**

- Sexually
- Water, when you drink it you can possibly get the disease
- Mosquitoes

### **Question #5 – Complications (can you prevent Zika?)**

- Birth defects (mother to child)
- Blood transfusions

### **Question #6 (trust and source of information)**

- Everyone thinks that can prevent Zika

How?

- Preventing mosquito breeding
- Mosquito repellents
- Cover drums
- Mosquito nets
- Long sleeves
- Fix or change water systems (so water wont collect in it)
- Chandler roofing instead of flat buildings
- Regular cleaning of bushes and gardens
- (not windows)

Who do you trust?

- Ministry of Health
- Doctors
- Internet (the last)
- (they are not reporting any cases)
- Not recording everything

Practices: What have you done?

- Every Sunday: cover barrels and use environmentally friendly mosquito repellents
- They make sure to collect water
- After Hurricane Erika , making sure water collection was done
- Keep windows and doors closed



- Use coils and spray inside the house

#### Financial Challenges

- Not to put mosquito nets
- Coming into cooperation (if neighbors or surroundings don't take care it's difficult)
- Neighbors with bushes, it's a forest and don't keep it clean
- Authorities should do inspections
- ... councils don't cut all the areas and they're very bushy
- Garbage collection doesn't come at times and it can take weeks

#### Reduce/ remove mosquitoes from the

- Coils
- Mosquito nets
- Screens
- Insecticides
- Complain to authorities
- (they have called the authorities but they show up)

#### Before Zika, what would you do?

- Some days the door is open and at 5 they make sure the door is closed because mosquitoes come in

#### Water Drums

- Put spills (bleach) in the water and keep it covered (not drinking water)
- Regularly clean out drums
- Clean and scrub regularly
- Put clothes on top
- Environmental officers show how to mosquito proof your drums
- (show how to mosquito proof your drums)
- Farms
- Overflow
- Tap
- Mosquito nets

#### 3 ways:

1. Don't focus just on Zika
  - a. We shouldn't just worry about this disease, but all
2. Information of the effects
3. Fogging: effective but they should inform before they come

#### Prevention: actively ensure that inspections are made

- Mosquito proof your household
- Keep drainage clean
- Clean regularly



- Educate people on the risks (they don't are until its dangerous)
- Community clean up
- Emphasis has been placed in the city rather than the country side
- Emphasize on personal protection for mosquitoes
- Protect yourself during sexual activity
- Widen the area in the country and make sure that every community is inspected
- Mosquito regulation criminalizes those who are breeding mosquitoes with \$11,000
- Education programs. You at least have a drum
- Microcephaly
- Vaccine

Why do they have laws if we don't enforce anything?

People instead of trying to improve the system they exploit it

(no one talked about vaccines)

**Wrap-up:** The facilitator stated the group discussed issues associated with Zika virus and prevention. Other topics discussed were about sexual transmission. The facilitator thanked everyone for taking the time to participate and reminded everyone to keep in mind that mosquitoes transmit diseases.

**Brief commentaries about the focus group:** Participants did not comment on the focus group. All participants received a meal and refreshments. The participants did an oral general evaluation after the focus group.

## Group D – Health Workers

### Roseau – Conference Room – Dominica Public Place Union

**Facilitators** – Ferdinia Carbon, Chief Environmental Health Officer, and Sylvester St. Ville, Environmental Health Officer

**Assistants** – Cristina Mana and Monica Prado, PAHO-WHO

The Focus Group was conducted from 11 to 11:55 in the morning and was comprised of seven health workers (women) from Roseau who were invited by the Environmental Health Office. All women signed the Informed Consent Form prior to beginning the session

Ferdinia Carbon, Chief Environmental Health Officer, gave an introduction at the beginning of the session and explained the intent of the group discussion and the expected outcomes of the exercise. Ferdinia Carbon emphasized that the outcome would enable the Environmental



Health Department to improve their overall efforts in reducing *Aedes aegypti* mosquito breeding sites.

Sylvester St. Ville began conducting the group and used a prepared guide. The facilitator emphasized that participants would be called by the numbers placed in front of them and that the recording was just for accuracy purposes. After 20 minutes of discussions, Ferdinia Carbon replaced Sylvester and started conducting the focus group. Sylvester was called for an assignment at the Environmental Health Department.

### **Description: key points of each participant**

#### **Question # 1 (is Zika a problem?)**

**2:** yes, it was, for me as individual and as a health educator to ensure people were informed to prevent getting sick. Garbage is a problem

**7:** very concerned, it affects people

✓ Sylvester rephrased the question by asking about the health sector's ability to respond

**2:** I was concerned about people travelling to northern areas and getting infected because there was a high rate of *Aedes*

**Xxx:** it's a concern because it's a new emerging disease

**Xxx:** There was a lot of news coming from the media and a lot of community sensitization

**Xxx:** I was concerned because of Guillain Barré Syndrome and microcephaly. We don't have the facilities to take care of the babies

#### **Question # 2 (who is responsible for prevention?)**

It's everybody's business (the group stated that it was the responsibility of the individual, the community and the national level)

**2:** Ministry of Health took action

**8:** Ministry of Health was on the ground

**5:** the general public is laid back because of other diseases. We are used to diseases like dengue, Chikungunya and Ebola. For the community Zika was not a big deal, and the information was there

**Xxx:** they believed if you are a man or you are not pregnant, you don't have to worry about it.

**Xxx:** the education, information and messages coming from the Ministry of Health were good

**Xxx:** they did a national clean-up campaign. The council was collaborating with the health ministry in the collection of garbage

**4:** yes

**2:** community, garbage, Ministry of Health

**7:** about water, people will continue to collect water

**Xxx:** it should take into account the impact of weather

**Question # 3 (who you know had Zika? – explain what happened) – 4 (how do you get Zika?)**

General answer: people were informed about sexual transmission, blood transfusion, and transmission from mother to child.

**Question # 5 (can you prevent Zika?)**

7: Use repellents and mosquito proof your water drums

2: screens

3: bed nets

Xxx: long sleeves

Xxx: water-proofing drums

Xxx: chemical treatment

**Question # 6 (trust and source of information)**

Xxx: The Ministry of Health

1: environment health

2: sites from credible sources: PAHO, CDC, WHO

✓ Assistant asked about other sources inside the community

Xxx: teachers, religious leaders, and doctors

Xxx: Health workers are the ones clarifying misconceptions.

Xxx: medical students and nurses

**Question # 7 (actions to prevent Zika)**

Xxx: insect repellents

Xxx: keep doors closed at dawn

7: screens and long sleeves

1: cover

2: citronella and emptying drums

✓ Ferdinia explained that the Environmental Health Department used to advice people to use oil or kerosene over water to prevent mosquitoes from laying eggs, particularly near swap areas

7: Clorox and bleach

✓ Ferdinia also explained that the Environmental Health Department told bleach companies to pull out any ads and publicity involving information on using bleach in water to prevent mosquitoes from laying eggs

Xxx: repair mosquito screens and make sure that objects do not have water

Xxx: oil, bleach

**Question # 8 (difficulties to take action)**

7: water collection

5: my home is clean but my neighbor needs to take action



- 2: blockage of drains
- 7: collection of garbage
- 2: concrete roof when it's not even
- 4: guttering
- 6: roofs

- **Pregnant woman at the health center were concern about the virus**

5: people are not aware, they are not paying attention to the sexual transmission aspect, and they see it as mild issue

- **Why they are not aware?**

- 7: rash but no fever
- 5: the test was not mandatory

- **Is there stigmatization or discrimination?**

- 5: no discrimination
- 7: they were afraid but not discriminated

**Question # 9 (reducing mosquitoes)**

- 5: chemical treatment, fogging, people don't open the doors or windows
- 5: experiences that worked – I left juice out and mosquitoes fell into it, I had to throw it out
- 7: very concerned about the long term effects
- Xxx: it is not sustainable
- Xxx: keep the area clean

**Question # 10 (before Zika, measures to avoid it in the house)**

- 1: drums
- 2: no recipients that can collect water, check the trees
- 2: Zika is there, what should be done, what's next? Leads to no action, the difficult to respond and take action on prevention

**Question # 11 (water storage)**

- 2: Environmental Health Department used to do home visits

**Question # 12 (cleaning frequency)**

- 2: cover drums
- 5: screens
- 1: cover
- 5: garbage



### **Question # 13 (top three ways to protect yourself)**

- 1:** Long sleeves and pants, drums, secure homes, use nets and repellents
- 2:** proper garbage collection, keep environment clean, taking you as role model
- 3:** proper garbage disposal, covering drums, protecting yourself by using repellents
- 4:** repellents, long sleeves, homes or tires for flowers, listen and read information
- 5:** Keep your surroundings clean, preventive measures like nets and citronella
- 6:** Keep the environment clean, water containers, windows nets, bed nets, repellents
- 7:** repellents net and screens
- 8:** use sand in flowers plates, guttering, and unlocking drains

**Wrap-up:** There was no final wrap-up. The facilitator thanked everyone for taking the time to participate.

### **Brief commentaries about the focus group**

The participants did not make comments about the focus group. All participants received a meal and refreshments. The participants did an oral general evaluation after the focus group.

### **Group E – Fishermen**

#### **Soufrière – Meeting Room – SS Marine Reserve Building**

**Facilitators** – Sylvester St. Ville, Environmental Health Officer

**Assistants** – Cristina Mana and Monica Prado, PAHO-WHO

**Observers** –Clement Marcellin (Senior Environmental Health Officer)

The Focus Group started at 15:30 pm and finished at 17:00 pm. It was comprised of eight fishermen (males) from Soufrière and Scott Head. The participants were invited by the Environmental Health Office in the District of Soufrière. All fishermen signed the Informed Consent Form at the beginning of the section, which had been previously read and explained for their understanding.

The introduction was done by Sylvester St. Ville (Environmental Health Officer) at the beginning of the section where he explained the objective of the focus group, which was to come together and discuss the impact that Zika has on communities and the overall perception of the participants in relation to vector control. He also emphasized that the outcome would enable the Environmental Health Department to improve their overall efforts in reducing *Aedes aegypti* mosquito breeding sites.



The focus group began with each fisherman introducing himself and was followed by a discussion guide prepared for the research. The facilitator emphasized that the recording was just for accuracy purposes. The assistants explained the consent form orally first and then the consent form was read and then everyone signed.

### **Description: key points of each participant**

#### **Question # 1 (is Zika a problem?)**

7: yes, it makes people sick, mosquitoes are a problem

5: I do not believe it's transmitted by mosquitoes, but by air

4: I wonder if it's the mosquito or something else

1: Yes, it's an important issue; I have Zika as well as other friends

6: Yes it is due to mosquito bites, I got it. We need more people to talk about it.

4: mosquito really? If so, why aren't more people getting Zika. We need more information

3: Yes, My daughter and I got Zika, I went to the hospital.

1: Yes, it prevents from working; we go 3 to 4 days without working.

5: Chikungunya arrived but you felt the symptoms, I don't believe it's the mosquito because what are the symptoms, why is it the same mosquito?

3: I got Chikungunya, all my body got hard

7: we are not clear about what we should do or not – fogging is very thin, it can't get inside the house. There are many problems and what has been done is not enough

✓ Sylvester explained that at the end of the focus group, he would answer any question and explain about the mosquito and diseases.

Xxx: I was listening to the information on the radio and the news, but health authorities were not coming to Soufriere

Xxx: People were getting Zika but they were not going to the hospital

#### **Question # 2 (who is responsible for prevention?)**

7: we are, everybody should know, we need more education  
(all participants were saying it's everybody's responsibility)

3: we

5: every two weeks environment people used to come to explain, talk, and work on the drums. This is not happening anymore. Zika is environmentally related

6: Min Health, look for all water

5: prevent mosquito from laying eggs

4: Min Health – empty the containers, ask people to cover. You cannot have bins uncovered. It's everybody's responsibility

Xxx: it should also be the community's responsibility

#### **Question # 3 (who you know had Zika? – explain what happened)**



**All:** Yes (everyone in the group pointed to #1 because he had Zika)

**4:** people were afraid to go to the hospital and get asked questions

**1:** I felt weak, I was afraid

**Xxx:** I had it for a few weeks, I had diarrhea and I was vomiting

**1:** (answering question about how do you know it was Zika) because my daughter got it after me – I was standing the pain but she couldn't and I brought her to the hospital and then in the hospital they told her it was Zika and I had the same symptoms before

**4:** not eating

#### **Question # 4 (how do you get Zika?)**

**4:** food, air, is it really from a mosquito?

**Xxx:** I believe it's the mosquito (two or three participants followed him)

**7:** listening to news, different types of mosquito, there are ones that are black and the one that is doing the harm has a black and white design

**6:** if it was transmitted by air, everybody would get it, so I assumed it was transmitted by the mosquito

✓ Sylvester asked people to go back to Chikungunya

**3:** that new mosquito is coming from transportation from other islands.

**Xxx:** Look at lionfish (invasive species in the Caribbean reef). It came from the USA and now has taken over the island. With the black and white mosquito it happened the same (took over the island)

**7:** Same happened with the lizards, before they were yellow and then the black one took over

**4:** mosquito eggs are coming from other islands

✓ Sylvester asked people if they know that Zika can be sexually transmitted.

**4:** Yes, it can

**7:** Yes, I believe in that. But I never heard about it.

#### **Question # 5 (can you prevent Zika?)**

**Xxx:** I don't think so, because if it is transmitted by a mosquito how's it possible to prevent it, they fly all over

**7:** mosquitoes are there every day, so you need to do things every day, spray today, spray tomorrow, everyday.

**4:** I kill mosquitoes – I use the racket when I am watching TV, and I also use coils. If you kill them, then others do not come back

**3:** prevention by taking care of the standing water and the blockage of the drains

#### **Question # 6 (trust and source of information)**

The group listed: Min Health

✓ Sylvester asked if anyone trust the media.

**7:** No, and yes if it's the Min of Health giving information to the media



**4 – 6:** we trust the media

✓ Sylvester asked why we are afraid of Zika.

**3:** baby abnormality

**7:** I believe Zika is causing the small headed babies

**5:** It's because the father and mother have a problem, not the mosquito

**Xxx:** If you are sick and have Zika, you can not transmit it sexually because when you're sick, you don't have sex.

**4:** I think a baby could get Zika

**7:** we should think about a way to prevent it – using net screens. 95% of the windows are not screened.

**3:** you can clean but the person next to you doesn't do anything to help

### **Question # 7 (actions to prevent Zika?)**

**3:** try to kill the mosquito, spray

**7:** make sure water is not exposed

**4:** use the net at night because most of the mosquitoes bite at night

**Xxx:** kill them using a racket, keep drums clean

**6:** using bleach on drums but before the environment gives us something to put in the water

✓ Sylvester asked about repellents?

**5:** they do not work because they don't last

**Xxx:** my son gave me repellent and I used it but when I went to sleep I heard the mosquitoes buzzing. I didn't have any more smell and my body. It doesn't last

**7:** keep the environment clean and closed (the household), spray, make sure the windows are screened. I can't take care of the mosquitoes outside but I can take care of the mosquitoes inside my house. The use of long pants and sleeves is not going to happen

### **Question # 8 (difficulties to take action) – 9 (reducing the mosquito)**

**5:** environmental officers should come more often

**Xxx:** they should leave the road path clear because there's a lot of bush

**7:** We need proper fogging, because it's not working. Not the ones done by trucks

**6:** don't use trucks to fog

**3:** I don't see it working much

✓ Sylvester asked about individual?

(participants said they did something)

**7:** we are doing something, no water on the boats

**2:** We are taking the water off the boats

**Xxx:** we are cleaning the boats with bleach

**7:** Alamo (name of the river that crosses the community. It's considered to be very polluted since human feces are disposed there) – it's a standing water and a mosquito breeding site, we need a big project



- ✓ Sylvester said that at the end of the section he would explain about the Alamo River.

### **Question # 10 (before Zika, measures to avoid it in the house)**

**3:** before Zika I used to spray, I never stop doing it

**Xxx:** taking care of the containers, but your neighbor should do that as well

**4:** keep your place clean, but the community must also do so, cover the drums

**7:** prevent exposing water, spray. Need more information

**Xxx:** prevent water to be stagnated

**Xxx:** Chikungunya was much worse than Zika

**Xxx:** Somebody must tell me exactly what to do (everyone agreed on that)

### **Question # 11 (water storage) and # 12 (cleaning frequency)**

**6:** the use of bleach in drums

**7:** I collect rain water when there is heavy rain (due to infrastructure problems there is a shortage of water after tropical storms) but then I throw it away

**4:** drums need to be well covered. I would check and clean it every month

**Xxx:** I clean my drum once a week

### **Question # 13 (top three ways to protect yourself)**

**3:** the community should get together, keep the environment clean

**5:** protect the environment, spray the house

**6:** protect your house and yourself

**Wrap-up:** The facilitator thanked everyone for taking the time to participate. Topics discussed: more information to help and prevent people from getting Zika, prevent water from being stagnant. After closing the group discussion, the facilitator explained that there are 24 different types of mosquitoes in Dominica, and that the one that causes Chikungunya and Zika is the *Aedes aegypti*. He informed the fishermen that the *Aedes* is not the one that bites at night when a person is sleeping, but rather, bites early in the morning and in the evening. It lives around the house and also inside the holes in trees. He also explained other diseases that are transmitted by virus such as polio and measles. In Dominica, no babies have been born with microcephaly caused by Zika yet, explained the facilitator. In regards to the Alamo stream, the facilitator explained that the *Aedes* cannot breed there because the water of the stream is very acid, the PH levels are very high, and Alamo is a very unsanitized site.

### **Brief commentaries about the focus group**

The participants did not comment on the focus group. All the participants received a meal and refreshments. The participants did an oral general evaluation after the focus group.



“Promoting environmental health to human health”



## Focus Group Consent Form: adults

I am being asked to participate in a research study being conducted by the Pan American Health Organization and the Ministry of Health and Environment Dominica. I understand that this qualitative study is based on focus groups to better understand how individuals are interacting with mosquitoes and are preventing contact to avoid the risk to contract Zika and other diseases such as Dengue and Chikungunya.

I have been given information about the study and the types of questions that will be discussed. I understand that there will be about (9) other persons participating and that it will be no longer than 60 minutes.

I understand that my participation is completely voluntary and I am free to decline to participate without any consequence.

I understand that any information I provide will be kept confidential, and will not be used in any way that can identify me, nor be available to anyone not associated with the study.

I understand that the interview will be recorded to facilitate the interviewer during analysis; however, all data will be destroyed following a reasonable time after completion of the project.

I also understand that there are no risks involved in participating in this activity beyond those risks expected in everyday life.

I have read the information above, by signing below and returning this form I am consenting to participate in this focus group.

Participants Name: \_\_\_\_\_

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Survey Representative: \_\_\_\_\_

Researcher Signature: \_\_\_\_\_

Date: \_\_\_\_\_



“improving environmental | trends | to human health”



## Focus Group Consent Form: children

My child (Son, Daughter) is being asked to participate in a research study being conducted by Pan American Health Organization and the Ministry of Health and Environment Dominica. I understand that this qualitative study is based on focus group to better understand how individuals are interacting with mosquito and are preventing contact to avoid the risk to contract Zika and other diseases as Dengue and Chikungunya.

I have been given information about the study and the types of questions that will be discussed. I understand that there will be about (9) other persons' participating and that it will be no longer than 60 minutes.

I understand that my child's participation is completely voluntary and he/she is free to decline to participate without any consequence.

I understand that any information provided will be kept confidential, and will not be used in any way that can identify my child, nor be available to anyone not associated with the study.

I understand that, the interview will be recorded to facilitate the interviewer during analysis; however, all data will be destroyed following a reasonable time after completion of the project.

I also understand that there are no risks involved in participating in this activity beyond those risks expected in everyday life.

I have read the information above, by signing below and returning this form I am allowing my child to participate in this focus group

Parents Name: \_\_\_\_\_

Signature: \_\_\_\_\_

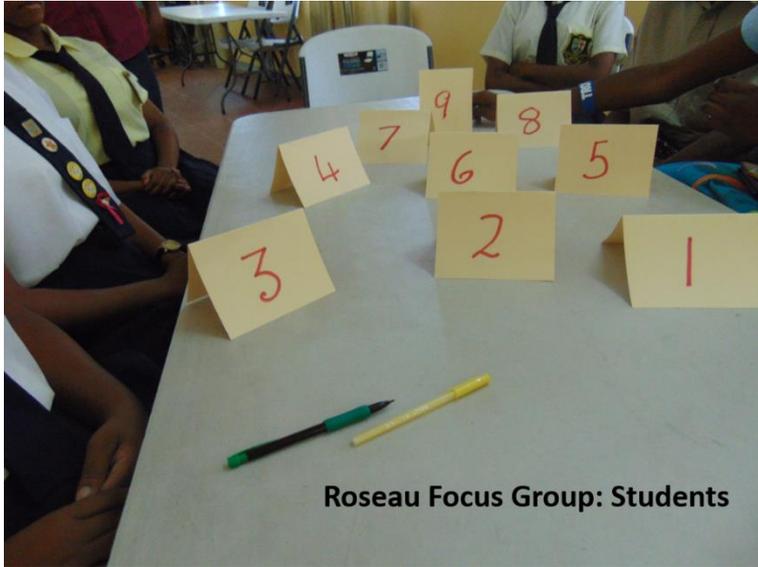
Date: \_\_\_\_\_

Survey Representative: \_\_\_\_\_

Researcher Signature: \_\_\_\_\_

Date: \_\_\_\_\_

## Visual Memory of the Focus Groups



Roseau Focus Group: Students

## Marigot Focus Group: Farmers

