

**Vector borne Diseases Assessment and Prevention Campaign, July – August 2023**  
**Aimeliik, Ngatpang, and Ngeremlengui States**

**Objective:** To improve sanitation and hygienic practice of the residence of five state in Palau by providing education and hands on training to each household to learn to identify, manage and minimize risk to vector-borne diseases and inform residential of upcoming SUPA Project Town Hall meeting and trainings.

**Method:** Vector borne diseases surveillance system and Information, Communication & Education (IC & E)

**Activities:** Household assessment and education

Outreach activity

State: Ngermlengui

Date: July 5 to July 16, 2021

Data:

Household population: 107

Surveyed: 107

Results:

Solid waste: 0%

Liquid waste: 36%

Toilet: 8.4%

Yard maintenance: 45%

There were total of 107 residential homes assessed for their poor sanitary and hygienic condition in Ngeremlengui state. Education and on-site training administered according to condition and level of risk observed at each household.

State: Aimeliik

Date: July 28 – Aug 12, 2021,

Data:

Household population: 100

Surveyed: 100

Results:

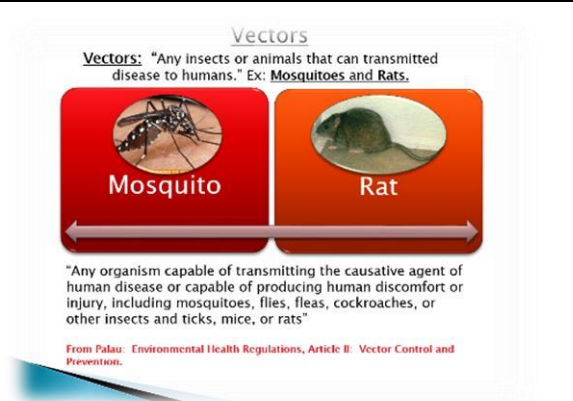
Solid waste: 5%

Liquid waste: 40%

Toilet: 9%

Yard maintenance: 61%

Aimeliik state is made up of five villages; Imul, Ngerkeai, Elechui, Ngchemiangel and Medorm. There were total of 100 household assessed for their sanitary and hygienic condition. In response to these defects, on-site education was provided with walk-around



yard identifying and removing debris and stagnant water that could have potential breeding sites for mosquito.

State: Ngatpang

Date: July 20 – 27, 2021

Data:

Household population: 57

Surveyed: 57

Results:

Solid waste: 5.2%

Liquid waste: 22%

Toilet: 5%

Yard maintenance: 47%

Ngatpang state is made up of two villages – Ibobang and Mechebechubel with 57 residential homes. Yard maintenance and liquid waste management observed as major findings for this state followed with general yard cleanliness and maintenance. Based on these sanitary factors, education and training was provided on site.

### **Vector borne prevention summary**

The Division of Environmental Health of the Bureau of Public Health, MOHHS, conducted a



vector-borne surveillance and *State Governor and Rep meeting to finalize SUPA Outreach* educational campaign in the state of Aimeliik, Ngatpang, and Ngeremlengui. There were total of 264 household assessments conducted in these states and four priority areas were identified as a route to vector infestation and a risk to vector borne diseases. The following priority areas were common among these states:

- Solid waste: abandoned chunk equipment i.e. old cars, boats, washing machine, stove, tires, et.
- Liquid waste: stagnant water for mosquito breeding sites form water leak due to plumbing issues, proper drainage and sewage system,
- Toilet system: outside latrines and sewage system not properly maintained
- Yard maintenance: litters and uncut grass and debris seen at yard

According to our data, it shows high percentage of household not properly have their Yard clean and maintained. As observed, there were also mosquito larva feeding from stagnant water from litters, trash, tires, flower bed/pot around the house. Solid waste materials have lowest percentage but have high probability for rodent infestation, mosquito resting site and lead poisoning.



### Education and training tips

On-site education and training was conducted to each household according to level of need. Household yard cleanliness and maintenance education provided including walkaround inspection to identify and remove of any debris that hold water for mosquito breeding, secure and cover equipment that can trap water and resting sites for rodent. Another immediate training tips was monitoring and management of wastewater system to avoid stagnant water, develop bad smell, and feeding site for rodent. In addition, Step-by-Step process to design and construct simple cesspool was also demonstrated and given guidance brochures.



### **Challenges**

- Social and cultural events in conflict with the scheduling of SUPA activities
- Weather events and COVID activities





### **Strength**

- Pick-Up Truck to bring team to and from state and to conduct 100 Percent household coverage and provide education & on-site training
- Mosquito surveillance trap have given DEH solid data to make inform decision and education. (SUPA donation)
- Household education campaign provides opportunity for the team to inform families of the upcoming SUPA trainings.




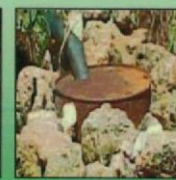

### **Lesson learnt**

- Household education campaign is found to be an effective tool for service provider to understand physical and financial needs of the families. It also provides comfortable and flexible space for families to voice out their needs and challenges for health provider to know how to help them.

## Attachments and photos:

Water catchment tank should have:	Proper treatments used to ensure safety of drinking water	Water treatment using Clorox
		
QUALITIES OF GOOD CATCHMENT TANK	TIPS FOR SAFE WATER:	RECIPE TO TREAT DRINKING WATER
<ol style="list-style-type: none"> <li>1. Solid or screen type cover</li> <li>2. Gutter</li> <li>3. Firm foundation / base</li> <li>4. Proper piping device</li> <li>5. First flush diverter</li> <li>6. Downspouts</li> <li>7. Made of non toxic building materials</li> <li>8. Away from trees/plants that can be leeway for pests to contaminate the water.</li> </ol>	<ol style="list-style-type: none"> <li>1. Boil water at a rolling boil for a minimum of one minute</li> <li>2. Use Clorox bleach to disinfect your drinking water. → After addition of Clorox, leave the tank overnight before consumption</li> <li>3. Use water test kits such as H2S kits available at DEH office to test water quality.</li> </ol>	<ol style="list-style-type: none"> <li>1. 1 gallon of water = 3 drops</li> <li>2. 5 gallons of water = 10 drops</li> <li>3. 55 gallons = 2 teaspoon</li> <li>4. 100 gallons = 1 tablespoon</li> <li>5. 200 gallons = 2 tablespoons</li> <li>6. 500 gallons = 5 tablespoons</li> <li>7. 850 gallons = 10 tablespoons</li> <li>8. 1000 gallons = 12 tablespoons</li> </ol>
<p>***** The public tap water in Koror and some parts of Airai are treated and safe to drink.            THE SAFETY OF THE CATCHMENT WATER DEPENDS ON THE HOUSEHOLD COMMITMENT TO MAINTAINING THE SYSTEM.</p>		
 <h3 style="color: yellow;">SAFE DRINKING WATER</h3>		

**WASTEWATER MANAGEMENT FOR KITCHEN & SHOWER FACILITIES**

### WASTE WATER MANAGEMENT FOR KITCHEN & SHOWER FACILITIES "CESSPOOL"

**FIRST STEP:**


- \* DIG A PIT
- \* PIT DEPTH DEPENDS VOLUME OF WATER USED
- \* **EXAMPLE:** AS 55 GALLON DRUM HOLDS 55 GALLON OF WATER
- \* **"PIT SIZE":**
- WIDTH (2) TWO FEET WIDE
- DEPTH (4) FOUR FEET DEEP

**SECOND STEP:**

- \* FILL PIT WITH SMALL ROCKS
- \* (1/4) OF THE PIT WILL BE FILLED SMALL ROCKS
- \* INSERT A BARRIER WHICH WILL PREVENT THE SOIL FROM FILLING THE SPACES BETWEEN THE ROCKS
- \* **"SOIL BARRIERS":** DRUM (REMOVE BOTTOM)

**THIRD STEP:**

- \* CONNECT DRAINAGE PIPE
- \* COVER
- \* PLASTIC BAG, OLD TENT, OR FLAT TIN
- \* RIP-RAP WITH ROCKS
- \* BURY WITH SOIL, SAND, SMALL ROCKS OR GRAVEL
- \* **"RIP-RAP" - A LOOSE ASSEMBLAGE OF NEARBY STONES OR LEFT BEHIND AS A FOUNDATION.**



### LIQUID WASTE MANAGEMENT: CESSPOOL