

The first set of factors relates to their beliefs about dengue and the risk reduction strategies. These factors include their perceptions of susceptibility of the community to dengue, perceptions of severity of dengue, perceptions of the threat of dengue to the community, and perceptions of the benefit and barriers to use of risk reduction strategies for dengue. This study also assumed that respondents' beliefs about dengue and the risk reduction strategies are influenced by their knowledge of dengue and in turn, their knowledge is influenced by their exposure to information and experiences on dengue, called in this study as cues to action.

METHODOLOGY

This study dealt with local leaders' risk reduction strategies for dengue based on climate information. The depth of data required by the research problem necessitated the use of qualitative research methodology. The research required intensive conversation and observation with the research participants. Thus, a case study design was applied.

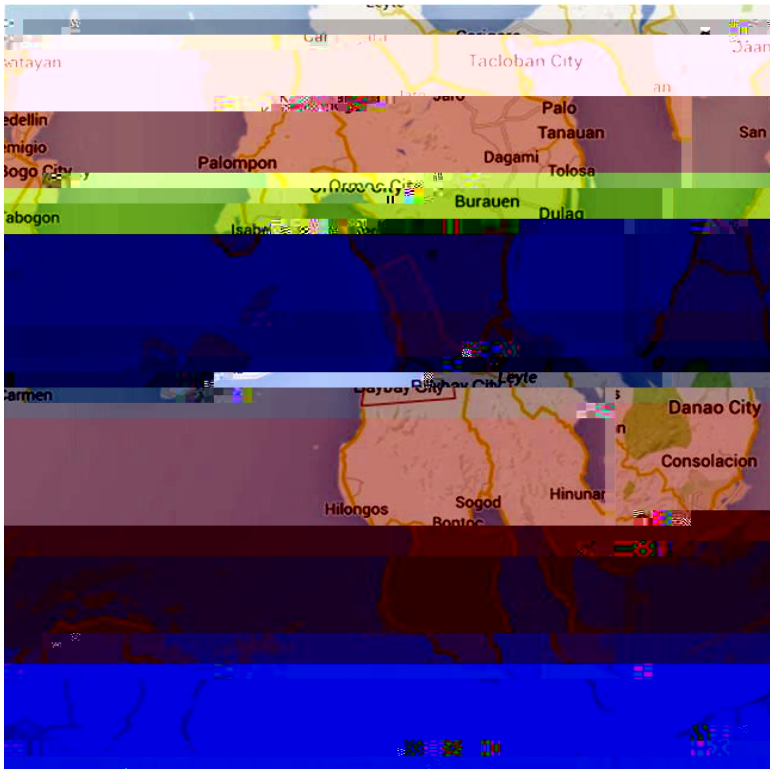
According to Yin (2009), a case study is an explanatory, exploratory, or descriptive analysis of a person, group, or event. Thomas (2011) added that a case study focuses on the analyses of persons, events, decisions, periods, projects, policies, institutions, or other systems that are studied holistically using mixed methods. Methodological triangulation (Mathison, 1988), was used to increase the reliability and validity of the interpretations of the findings. These multiple methods included analysis of the respondents' common decisions to the given forecasts, focus group discussions (FGD), ocular observations in the communities, and decision-making exercise.

Respondents for this study were current barangay officials in two selected barangays in Baybay City, Leyte. The choice of this group of respondents was hinged on the fact that barangay officials play important roles in the initiating development activities including prevention and control of diseases. Barangays Kansungka and Gacat were chosen in coordination with the Rural Health Unit for this study for the following reasons: 1) these communities had dengue infection every year, 2) the

officials were willing to participate in a decision-making workshop and have their responses recorded and analyzed, and 3) the communities were peaceful.

Baybay is an agricultural city located in Leyte. The common sources of livelihood are farming and fishing. It is mountainous from the East and it slopes down West towards the shoreline. The city has a generally wet climate and storms and typhoons regularly occur in the city. Typhoons “Yolanda” (Haiyan), and “Ruby” (Hagupit) are two of the recent super-typhoons that have visited the city causing significant destruction, the former in 2013, and the latter in 2014. Figure 2 shows Baybay in the province of Leyte.

Figure 2. A map showing the location of Baybay City



As of 2010, Baybay has a population of 102, 841. Barangay Gacat has a population of 1, 865. Barangay Kansungka has 837.

The instruments used in this research were focus group discussion (FGD) guide, key informant interview (KII) guide, and decision -making template. To capture the different realities in the two communities, the FGD for each barangay was done separately. Following the FGD, a decision-making workshop was conducted to elicit local leaders' risk reduction strategies for dengue based on the climate for a dengue risk reduction strategy (DRS) (Briand et al., 2008).

Referred to by other authors as “role pla

Table 1. Flow of activities in the decision-making workshop

Activity	Brief Description
Orientation	Overview of the workshop activities, introduction of the resource person and facilitators and documenters, discussion of objectives and expectations
Decision-Making Exercise	<p>The decision-making exercise formed the heart of the workshop. For this portion, activities followed this sequence below. Questions were entertained by the facilitator.</p> <ul style="list-style-type: none"> • Respondents were asked to assume that they had experienced either Low, High or Average rainfall for the past year. • Playing of the video on the climate forecasts produced for this study • Decision-making by the local leaders (participants) • Presentation of decisions by participants • Discussions to clarify things and gather additional data <p>This process was repeated three times because there were three seasonal forecasts (i.e., High, Low and Average rainfall).</p>
Wrap Up	Participants were encouraged to ask more questions about SCF use, issues on climate variability and concerns related to reduction of risk dengue for their constituencies.
Closing Ceremonies	Acknowledgment for the local of the local leaders' participation, impression by participants and formal ending of the workshop.

Study Tools. Each climate forecast was presented in video. The choice of this medium was based on the following considerations: 1) A video is effective in presenting realistic information, 2) the respondents, being officials of a local government unit should be highly exposed to video and television (TV), and 3) participants are familiar with weather forecasts on TV. For this study, three video climate forecasts were produced. The video presentations were designed to be similar to the weather forecasts aired on commercial television. Video scripts were subjected to a review by communication specialists and technical experts to determine the appropriateness and understandability of the video presentations and technical accuracy of the videos, respectively.

As a qualitative research, data in this study are presented in narrative form after having been subjected to a thematic analysis. Table 2 presents the data analysis matrix for this study.

CONCLUSION AND RECOMMENDATIONS

The local officials who participated in this study are highly exposed to information on dengue but have low exposure to climate information. They also have high awareness of the disease and its preventive measures. Currently, respondents apply various strategies to reduce the risk of dengue in the irrespective communities. Regardless of forecast, respondents would implement awareness campaign on dengue

Gleaning from the respondents' courses of action based on climate information, it appears that these local officials fail to recognize the relationship between rainfall pattern and dengue outbreak. Given the proven efficacy of climate information as an early warning system for dengue, it is suggested that local leaders be taught on how to capitalize on information as a tool for managing the risks of dengue.

For researchers, respondents reported methods for treating dengue including drinking *gatorade* and drinking of *gatas-gatas* (*Euphorbia hirta*) extracts. It is recommended that studies be conducted to probe into the efficacy and safety of treating dengue patients with *E. hirta* extracts. Research shows that *E. hirta* absorbs heavy metals including lead (Mendoza & Hipe, 2008), a carcinogenic metal.

Moreover, the present study has focused on two barangays only. More studies are needed to verify the findings of the results. Future studies may involve more local leaders and cover more areas.

REFERENCES

- _____ (2014). Centers for Disease Control and Prevention: Epidemiology of Dengue. Retrieved May 22, 2014, from Centers for Disease Control and Prevention: <http://www.cdc.gov/dengue/epidemiology/>.
- Campilan, D. M. (1995) . *Learning to change, changing to learn: Managing natural resources for sustainable agriculture in the Philippine uplands*. Wageningen, The Netherlands: Wageningen Agricultural University.
- Capeding, M.R. (2011). Dengue in the Philippines. Retrieved on 10 August 2011 from <http://www.denguematters.info/content/issue-7-dengue-philippines>.
- Espino, F., Marco, J., Salazar, N., Salazar, F., Mendoza, Y., & Velasco, A. (2012). Community-based dengue vector control: Experiences in behavior in Metropolitan Manila, Philippines. *Pathogens and Global Health*, 106(8), 455-460.
- Kilpatrick, M., & Randolph, S. E. (2012). Drivers, dynamics, and control of emerging vector-borne zoonotic diseases. *The Lancet*, 380 (9857) 1946-1955.
- Mendoza, C.S., & Hipe, J. (2008). Lead content of leaves in Cebu City, Philippines. *South Pacific Studies*, 28(2), 43-52.
- Mertens, D. (2005). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative methods*. (2012).