Vol. 12 · March 2013
Print ISSN 2012-3981 • Online ISSN 2244-0445
doi: http://dx.doi.org/10.7719/jpair.v12i1.217

JPAIR Multidisciplinary Research is produced
by PAIR, an ISO 9001:2008 QMS certified
by AJA Registrars, Inc.

Climate Change Awareness of the Community Officials in the Municipality of Saint Bernard, Southern Leyte: Gear towards Vulnerability and Adaption

GARY C. GARCIA
garychmich@yahoo.com.ph
ORCID No. 0000-0001-6528-2967
Southern Leyte State University-San Juan Campus,
6611 San Juan, Southern Leyte, Philippines

ABSTRACT

Eastern Visayas is constantly experiencing a series of calamities since the tragic mudslide in the community of Guinsaugon Saint Bernard, Southern Leyte in 2006. As a result, the state of calamity declared in almost every part the country due to heavy rains that devastated agriculture, livestock and properties. This study was conducted to assess the level of the community officials' related awareness on climate change, more particular on its cause and effect, thought and belief, and the course of action through community ordinances related to climate change. The study utilizes the descriptive survey method of research. Data was analyzed and interpreted using weighted mean and percentages to describe the level of awareness of the elected officials towards climate change. Majority agreed that climate change is happening and presently affecting the people in the community. Thought of respondents towards climate change is highly coupled with religious thinking. Actual state of affairs (situation) is the priority of the community officials leading to the inaccurate expectation of the long term effect of climate change. Community officials' awareness

on the causes and effect of climate change is observable but limited on vulnerability and adaptation. Thus, additional exposure and depth understanding on climate change is recommended.

Keywords **-** Climate change, awareness, political and social responsibilities, descriptive-survey, Saint Bernard, Southern Leyte, Philippines

INTRODUCTION

Climate change is an area that is currently in dire need of a wide range of publicity and other measures in order to mitigate its effect on the society (Ekpho, Ekpho, 2011). The Philippines has experienced temperature spikes brought about by climate change. It has been observed that warming is experienced most in the northern and southern regions of the country while Metro Manila has warmed less than most parts. Hot days and hot nights have become more frequent than before. Extreme weather events have also occurred more frequently since 1980. These include deadly and damaging typhoons, floods, landslides, severe El Niño and La Niña events, drought, and forest fires. Adversely affected sectors include agriculture, freshwater, coastal and marine resources and health (The Eastern Visayas Climate Project Forum, 2012).

Eastern Visayas is constantly experiencing a series of calamity since the tragic mudslide in the community of Guinsaugon, Saint Bernard, Southern Leyte in 2006. First quarter of 2012, the state of calamity once again was declared in the municipality due to heavy rains that devastated agriculture, livestock and properties.

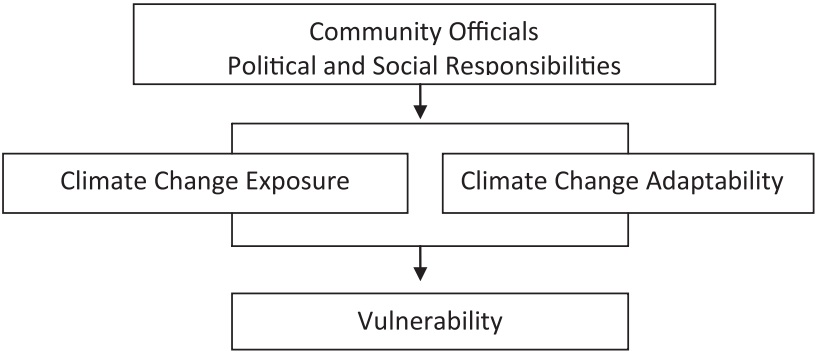
For purposes of the Revised Penal Code, the Community Chieftain, Youth Council Members and members of Peace and Order Committee in each Barangay shall be deemed as persons in authority in their jurisdictions (The Local Government Code of the Philippines, Section 38).

Servant-leadership incorporates the ideals of empowerment, total quality, team building, and participatory management, and the service ethic into a leadership philosophy. In the words of the Greenleaf Center for Servant-Leadership (1997, p. 4), this model of leadership emphasizes "increased service to others; a holistic approach to work; promoting a sense of community; and the sharing of power in decision making." Servant-leaders must be value- and character-driven people who are performance and process oriented.

A servant-leader may be defined as a leader whose primary purpose for leading is to serve others by investing in their development and well being for the benefit of accomplishing tasks and goals for the common good.

Good leaders know how to protect the community in times of disaster, with the ability to guide his people to overcome problems. For this, community officials are expected to be aware more of the recent events and issues that have implication in the life of its people.

FRAMEWORK



Vulnerability = exposure + adaptability

Vulnerability = degree to which a system or species is susceptible or unable to cope with adverse effect of climate change.

Climate Change Adaptation = an adjustment in natural or human system in response to actual or expected climate stimuli or their effects which moderate harm or exploits benefit opportunities.

OBJECTIVES OF THE STUDY

This study intends to assess the level of awareness of the community officials' related awareness on climate change, more particular on its cause and effect, thought and belief, and the course of action through community ordinances related to climate change. Result will be utilized as baseline information for vulnerability and adaptation.

METHODOLOGY

The study utilized the descriptive survey method of research. The proponents personally administered the conduct of the survey with elected officials of the selective coastal and upland communities in the municipality of Saint Bernard as respondents. Data was analyzed and interpreted using weighted mean, percentages, to describe the level of awareness of the elected officials towards climate change. The researcher presents the proposal before the municipal council meeting and secured permissions from the Local Government Unit through the municipal mayor.

RESULTS AND DISCUSSION

Demographic Profile of the Community Officials

As observed in Table 1, more than half of the respondents are male, 72% are married. As to their educational background, 32 are able to attend/finished Secondary course, 23 in college, and 12 in elementary.

The respondents are composed of 8 community captains, 43 community officials, 6 youth council chairman, and 10 youth councilors. Majority are in less than one year experience in terms of service.

Table 1. The Demographic profile of the community officials

Sex	Male			Female	
	43			24	
Civil Status	Single	Married		Separated	Widow
	14	48		2	3
Age	15-17	18-33	34-49	50-65	Over 65
	3	13	29	22	1
Highest level of education	No formal	Elementary		Secondary	College
	0	12		32	23
Number of years in the community	Less than one year	1-19 years		20-39 years	Over 40 years
		10		25	32
Current position	Brgy. Chairman	Brgy. Councilor		SK Chairman	SK Councilor
	8	43		6	10
Number of years in service	Less than one year	1-19 years		20-39 years	Over 40 years
	37	17		5	8

Community Officials Level of Awareness on Climate Change

As reflected in item 2, all of the community officials have heard about climate change. Most (33%) signifies that they learned climate change through watching Television, 19% from school, 13% from news paper, 12% through conversation with family members, 9% from internet, 8% from a book and another 6% from word of mouth.

Kapoor (2011) in his study entitled "Awareness of the Rural People about Environment Protection through Mass Media" exposed that television and radio were the most preferred information tools in environmental awareness, utilized by 39.5% and 26 % of the respondents respectively.

Table 2. The community official awareness on climate change.

1. Had you heard about climate change?	Frequency	Percentage
1.1 yes	67	100%
1.2 no	0	0%
2. How did you hear about climate change?		
2.1 searching the internet	6	9%
2.2 at school	13	19%
2.3 at home (through conversations with family members)	8	12%
2.4 from a TV program	22	33%
2.5 from a book	5	7%
2.6 from a newspaper	9	13%
2.7 word of mouth	4	6%
2.8 I have never heard about it	67	100%

Thought on Climate Change

Table 3 shows respondents thought on climate change. As shown in item 1, 97 % agreed that the government has already consulted community officials in identifying areas of concern about climate change.

More than 80 % are of the same mind in items 2.1, 2.2, and 2.3 that climate change is happening, presently affecting the people in the community, and every individual can do something to adopt climate change. The majority of the respondents agreed that living for today is more important than worrying about the effects of climate change in 50 years.

The last decade has been marked by growing public concern and widespread media coverage surrounding the possibility of Global Warming due to an increased green house effect. To a significant degree, the effectiveness with which society responds to this possibility depends on how well it is understood by the individual citizen (Bostrom, Morgan, Fischhoff, Read, 1994).

Despite of, majority are in favor in item 2.5 that climate change will reduce the quality of life of children in the future. Responses in items 2.6 and 2.7 reflect strong religious implication. Hence, 42% of the respondents agree in the statements; there is religious significance to climate change and climate change is a natural occurrence. Captivatingly, respondents' responses on item 5.2 of table 3 suggest that they need more information/knowledge on how to stop climate change.

Table 3. Community officials thought on climate change

Thought on Climate Change	A	D	N
1. The local government has already consulted us to enable us to identify our areas of concern about Climate Change.	65	0	2
2. What are your thoughts about the following statements about Climate Change?			
2.1 Climate Change is happening	59	3	5
2.2 Climate Change is affecting the people of this community already	60	2	5
2.3 Every individual can do something to adapt to climate change	55	2	10
2.4 Living for today is more important than worrying about the effects of Climate Change in 50 years time	39	17	11
2.5 Climate Change will reduce the quality of life of my children & grandchildren in the future	57	6	4
2.6 There is religious significance to Climate Change	28	19	20
2.7 climate change is a natural occurrence	28	28	11
2.8 I am seriously concerned with what Climate Change may bring	50	6	1

3. What do you think are the causes of climate change	f	%	rank
3.1 Burning Fossils eg Coal, Gas, Oil, Petrol	46	69%	2
3.2 Deforestation (Kaingin, Logging)	54	81%	1
3.3 Don't Know	0	0%	4
3.4 Other (please note all ideas)			
3.4.1 Improper disposal of garbage and waste materials	6	9%	3

4. How is global climate change negatively impacting your quality of life?	f	%	rank
4.1 High fuel prices	19	28%	4
4.2 High energy costs	24	36%	3
4.3 High commodity cost	28	42%	2
4.4 Drought conditions affect crop yield (rice, camote, etc.)	38	57%	1
4.5 Fires threaten home and/or business	9	13%	6
4.6 Family pressure to alter lifestyle	5	7%	7
4.7 Job loss due to low crop yield	15	22%	5
5. Which statement describes your position best	f	%	rank
5.1 I am well-informed what I personally can do to stop climate change	22	33%	2
5.2 I am not very well-informed but I would like to learn how I can help to stop climate change	44	66%	1
5.3 I believe that climate change problem is exaggerated and it doesn't need urgent solution (at least my personal participation is not needed at all)	1	1%	3

Community Ordinances Related to Climate Change

Table 4 shows the distribution of existing community ordinances related to climate change ranked according to the number of times reflected in the questionnaire. Rank 1 is the ordinance on solid waste management; total log band, reforestation, and illegal fishing tied in rank 2; followed by (rank 3) the ordinance regulating rice farmers not to burn rice straws, panicles and the like; next is rank 4, coastal resource management; rank 5 anti smoking; rank 6 illegal quarrying; and the last are the clean and green ordinance.

"Massive land conversion, long-term deforestation, mining in island ecosystems and forests and lack of solid waste management are just some of the culprits," TCRP disaster risk reduction and management expert Miguel Magalang said.

Climate change and Philippine forests are directly linked to each other. Changes in climate are affecting the forests and its ability to deliver its environmental services. In the same manner, degradation of the forest resources results to emission of carbon dioxide (CO2) in the atmosphere which contributes to climate change (The Journal of Environmental Science and Management, 2010).

Table 4. The list of existing local ordinances on climate change

Ordinances	frequency	rank
1. Solid Waste Management / RA 9003	38	1
2. Total Log Band and Reforestation	27	2
3. Protection of Fish Sanctuary, Illegal Fishing	27	2
4. Regulating the rice farmers not to burn rice straws, panicles and others	13	3
5. coastal resource management	10	4
6. Anti Smoking /RA 8749	8	5
7. illegal quarrying	7	6
8. Clean and Green	5	7

Most respondents signify that they learned climate change through watching television**.** Result shows that the government has already consulted community officials in identifying areas of concern about climate change. Majority agreed that climate change is happening and presently affecting the people in the community. They believed that every individual can do something to adopt climate change. However, equivalent to 58% agreed that living for today is more important than worrying about the effects of climate change in 50 years. Despite of, majority are in favor that climate change will reduce the quality of life of children in the future. Many of them agreed that there is religious significance to climate change and climate change is a natural occurrence. Rank 1 in the list of existing community ordinances related to climate change is the ordinance on solid waste management followed by total log band, reforestation, and illegal fishing.

CONCLUSIONS

Community officials' awareness on the causes and effect of climate change is observable but limited on vulnerability and adaptation. Their thought towards climate change is highly coupled with religious thinking. Actual state of affairs (situation) is the priority of the community officials leading to the inaccurate expectation of the long term effect of climate change. Related ordinances such as solid waste management, total log band, reforestation, and illegal fishing are in accord with the concept of climate change.

Generally, results established baseline information on community officials' appreciation and approaches on Climate Change in relation to the concept vulnerability is equal to exposure plus adaptability.

RECOMMENDATIONS

Climate change is a worldwide fear international leader should initiate appropriate action to prevent catastrophe that would be brought by this circumstance. Thus, the need of community officials on additional exposure and depth understanding on the vulnerability and adaptation specifically, on how to stop or to minimize the effect of climate change was very obvious. It is recommended that there should be a series of orientation seminar on climate change vulnerability and adaptation for community officials.

Institutionalization of the process of greenhouse inventory, particularly among the government agencies concerned and greater involvement of the academe through related studies on adaptation and vulnerability under climate change conditions are suggested. At the institutional level, the Philippines were one of the earliest countries to recognize the importance of a systematic institutional response to the problem of climate change (La Viña, 2008).

The national government has adopted a National Framework on Climate Change and is about (as of 15 June 2011) to adopt a new National Climate Change Action Plan, policy issuances that take into account both domestic law as well as the recent developments in the UNFCCC. This illustrates that the Philippines does not see the emerging international regime on climate change as an imposition but as a welcome development (La Viña, Dulce, Sano, 2011).

LITERATURE CITED

Bostrom, A., E. Roth, M. G. Morgan, B. Fischhoff and L. Lave
1994 Risk Analysis, Volume 14, No. 6, 1994. Retrieved on August 2012 from http://goo.gl/7Ry04

Ekpho, I.J. and U.I. Ekpho
2011 Assessing the Level of Climate Change Awareness among Secondary School Teachers in Calabar Municipality, Nigeria: Implication for Management Effectiveness. Journal of Humanities and Social Science, Volume 1. No. 3

La Viña, A.
2008 Addressing Climate Change in the Philippines: An Integrated Adaptation-Mitigation Approach, Philippine Climate Change Policy: Mitigation and Adaptation Measures. Experts Dialogue, The University of the Philippines Law Center, U.P. Diliman.

La Viña, A., J. C. Dulce and N. Saño
2011 National and Global Energy Governance: Issues, Linkages and Challenges in the Philippines. Retrieved on June 2012 from http://onlinelibrary.wiley.com /doi/10.1111/j.1758 5899.2011.00134.x/full

Kapoor, N.
2011 Awareness of the Rural People about Environment Protection through Mass Media, International Conference on Chemical, Biological and Environment Sciences (ICCEBS'2011) Bangkok. Retrieved on August 2012 from http://psrcentre.org/images/extraimages/1211545.pdf

Section 38
2000 The Local Government Code of the Philippines. Retrieved on May 2012 from www.doe.gov.ph/cc/ccp.htm.

2010 Science and Society: Understanding Global Climate Change and Setting Local Actions in Eastern Visayas. Retrieved on May 2012 from https://sites.google.com/site/evclimateforum/project-definition

The Journal of Environmental Science and Management
2010 Retrieved on August 2012 from www.journals.uplb.edu.ph/index.php/JESAM

Pursuant to the international character of this publication, the journal is indexed by the following agencies: (1) Public Knowledge Project, a consortium of Simon Fraser University Library, the School of Education of Stanford University, and the British Columbia University, Canada; (2) E-International Scientific Research Journal Consortium; (3) Philippine E-Journals; (4) Google Scholar; (5) Index Copernicus; (6) Scholastica; (7) Researchgate; (8) Lacriee of France; and, (9) University Library of Leipzig, Germany.