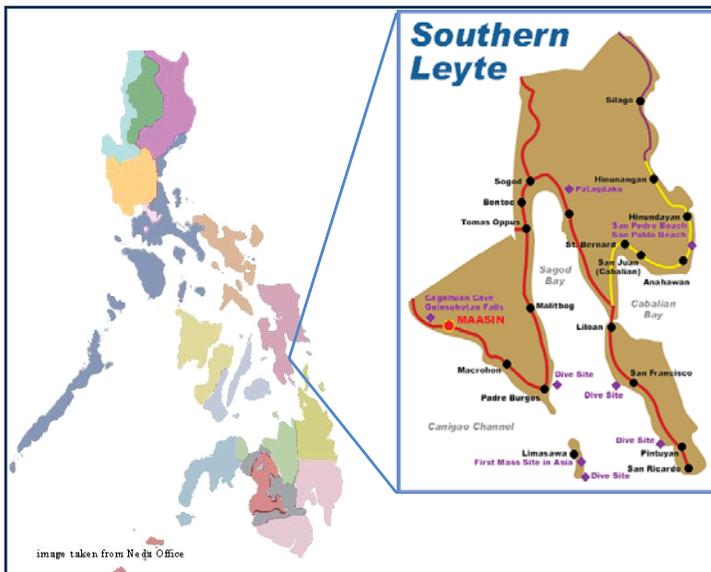


Survey Site: Southern Leyte, Philippines

Background of the Study

Southern Leyte, one of the two Philippine survey sites selected for MICRODIS study is a province located in Eastern Visayas, Philippines, and is composed of 19 municipalities (502 barangays). The province is classified by the Mines and Geosciences Bureau as one of the ten areas in the Philippines that is prone to landslides.

Figure 1: Map of the Philippines and Southern Leyte



Source: National Economic Development Authority

The MICRODIS survey was carried out in the municipalities of Hinunangan and St. Bernard. Hinunangan is a fourth class municipality is subdivided into 40 barangays and had a total population of 27,712 persons in 2007. The Municipality experienced an earthquake in 2007 with a magnitude 6.0 on the Richter scale which damaged a considerable number of infrastructures; both public and private. St. Bernard is composed of 30 barangays and had a total population of 25,257 in 2007.

A landslide triggered by two weeks of heavy rainfall nearly occurred in Guinsaugon, St. Bernard destroying properties and hundreds dead/missing.

From each municipality, four barangays were selected, two of which were least affected and another two were most affected by natural disasters. The general objective of the study was to uncover the effects of and the coping mechanism for disasters at the household and the individual level. A total of 500 households participated in the study.

Summary Statistics

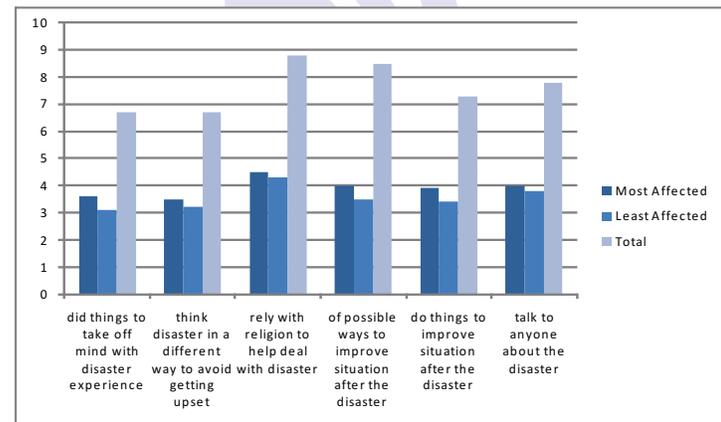
Population Coverage

- Total of 1,944 individuals constitute study coverage
- Average age: 25 years
- Age pattern shows majority belong to the labor force
- 49% are married
- Predominance of windstorm was experienced by all households. Severity was perceived to be intense in areas identified as most affected.

Social Impacts

- Individual coping mechanism showed that the most popular option is to “rely on religion to help deal with disaster”
- Assessment of individual in communal coping indicates preference of pro-social actions of social joining and seeking support which underlies resilience, collective concern and reciprocity
- The number of social contacts did not change but the quality of social relationship did. Closer relationship and bonding, less tension and intrigues, greater sense of volunteerism and cooperation characterized the post-disaster relationship.

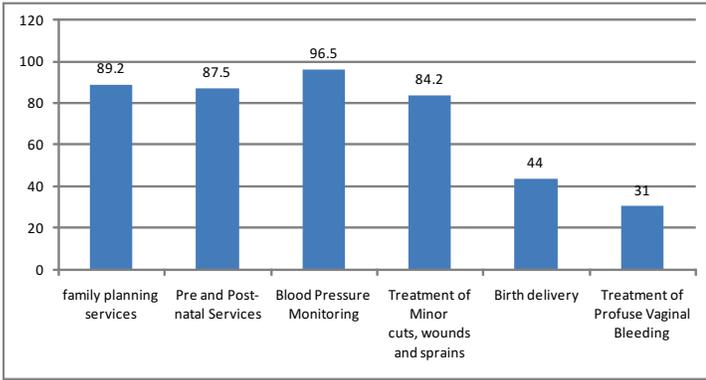
Figure 2: Coping Mechanism Index: Southern Leyte



Health Impacts

- Except for services relating to treatment of profuse vaginal bleeding and birth delivery, majority affirmed availability of health care services in pre and post disaster occurrence.
- Access to these services post disaster was jeopardized due to damaged roads.
- Children's health was perceived to be compromised by increase incidence of infectious diseases (diarrhea, acute respiratory infections and skin infections).

Figure 3: Percent of Sample Population Affirming Availability of Selected Health Services



Economic Impacts

- Immediately after disaster, the predominant coping behaviors were sale of assets (notably livestock), obtaining formal loans and borrowing money from informal sources (friends and relatives).
- A very large majority experienced damages to dwelling units.
- Seven and six in every ten individuals in affected and least affected areas affirmed the effect of natural disasters in daily routine and on main occupation.

Figure 4: Percentage of Households Incurring Economic Damages

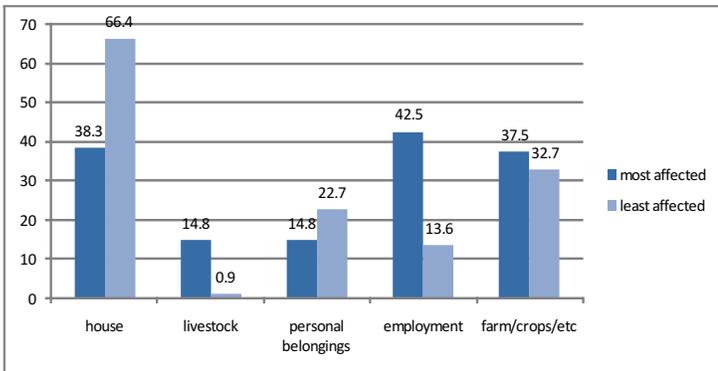
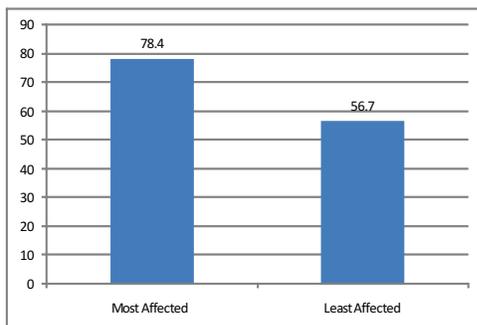


Figure 5: Percent of individuals who claimed that disaster affected their daily routine



Integrated Impacts

- Food sufficiency was a greater problem in one study site compared to the other.
- The correlates of anxiety and depression include sex, age, social support from different sources, number of natural disaster experienced in the last five years, perceived assessment rating on how traumatic was the experience, coping index (how many times individuals do certain things to deal with the consequence of the disaster) and number of associations/organizations of which a respondent is a member.
- Support from friends is inversely associated with anxiety index, that is, the less support received from friends, the higher the anxiety level.
- Predictors of health, social and economic impacts of natural disasters were identified. The best predictor of each component index is the current health condition.
- The unraveling of the web of association of demographic, health, social and economic variables yielded result that clarifies the temporal flow of relationship. Economic loss is likely to impact on health via access to health care being compromised, availability of health services and increase incidence of infectious diseases to children less than five years old.

Table 1: Multiple Regression Coefficients (Final Model) of Composite Indexes of Social, Economic and Health Cost, Selected Areas in the Philippines, 2009

Variables	Unstandardized Coefficient		Standardized Coefficient Beta	t	Sig
	B	Std. Error			
A. Dependent Variable: Health Cost					
Constant	1.161	.252		4.612	.000
- household size	.023	.010	.050	2.337	.020
- general health condition of respondent	.957	.026	.808	37.355	.000
- sense of community index	-.179	.067	-.058	-2.674	.008
R = .800 ; R ² = .640 ; F-value = 471.222 ; Sig = .000					
B. Dependent Variable: Social Cost					
Constant	18.349	.758		24.201	.000
- age of respondent	-.016	.008	-.113	-1.851	.066
- household size	-.117	.051	-.138	-2.281	.024
- general health condition of respondent	-1.081	.153	-.423	-7.086	.000
- total number of disaster experienced	-.295	.094	-.187	-3.123	.002
- total amount of damages on household goods and valuables	4.864E-05	.000	.148	2.485	.014
R = .5220 ; R ² = .273 ; F-value = 15.753 ; Sig = .000					
C. Dependent Variable: Economic Loss					
Constant	27777.638	3634.672		7.642	.000
- general health condition of respondent	-3021.389	1249.485	-.087	-2.418	.016
- was access to usual health care compromised after the disaster	-12342.634	2901.410	-.153	-4.254	.000
- infectious diseases incidence of children during occurrence of disaster	-12013.535	4294.407	-.100	-2.797	.005
R = .194 ; R ² = .038 ; F-value = 9.898 ; Sig = .000					