

Gender-differentiated adaptation and coping mechanisms to extreme climate event: A case study on the coastal households in Dumangas, Iloilo, Philippines

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Outline

- I. Background of study
- II. Methodology
 - 2.1. Study sites
 - 2.2. Sources of data
 - 2.3. Data analysis
- III. Results and Discussion
 - 3.1. Study sites
 - 3.2. Profile of respondents
 - 3.3. Impact of typhoon Frank
 - 3.4. How gender roles inside and outside the HH are affected during typhoon and flooding
 - 3.5. Adaptation strategies
 - 3.6. Coping mechanisms
- IV. Conclusion and recommendations
- V. Acknowledgment

I. Background of the study

- ❑ The geographical location of the Philippines makes it one of the countries prone to various climatic hazards, particularly typhoons
- ❑ In mid-2008, Philippines was devastated by Typhoon Frank (international code *Fengshen*)
- ❑ Worst hit were the provinces of Iloilo, Aklan, Capiz, and Antique – caused the worst flooding in Western Visayas (Burgos, 2010)
- ❑ Biggest letdown in the GRDP of Western Visayas in its 3 major sectors namely Agriculture, Fishery and Forestry (AFF), Industry and Service (Pendon, 2009)
- ❑ Extreme weather conditions → disasters → hamper development initiatives

I. Background of the study, cont'd.

- ❑ Communities need to understand the dynamic interaction between nature and society
- ❑ Responses should be based on gender dynamics
 - *Reduce existing vulnerabilities*
 - *Build more resilience to such vulnerabilities*
 - *Ensure faster recovery*
- ❑ This study explored:
 - *How gender roles are affected when climate conditions change?*
 - *In what ways do women and men adapt and cope to an extreme climate event?*

II. Methodology

2.1. Study sites

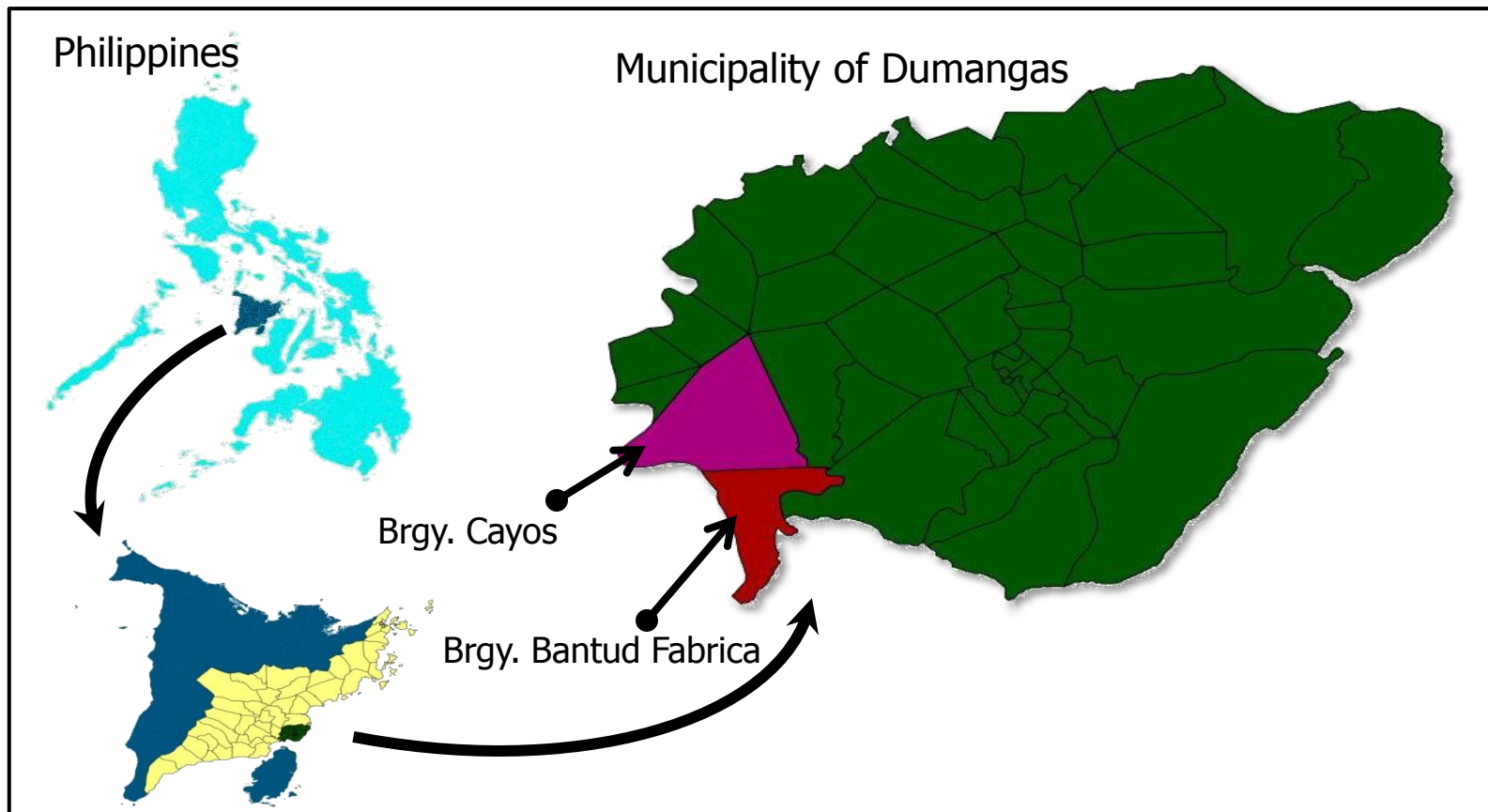


Figure 1. Brgy. Cayos and Brgy. Bantud Fabrica, Dumangas, Iloilo, Philippines (Source: philgis.org)

II. Methodology, cont'd.

2.2. Sources of data

- ❑ 120 respondents
- ❑ Survey instrument was adapted from Predo (2010)
- ❑ FGDs, KIIs and secondary data

2.3. Data analysis

- ❑ Descriptive statistics
- ❑ Adaptation strategies and coping mechanisms were documented

III. Results and Discussion

3.1. Study sites

- ❑ Dumangas is a 3rd class municipality located at the South East part of Panay Island, Philippines
- ❑ It is composed of 45 barangays, 17 of which are coastal
- ❑ Farming and fishing municipality since a significant portion of its land is allotted to agricultural and aquaculture activities
- ❑ Flooding occurs approximately twice a year
- ❑ Barangays Cayos and Bantud Fabrica are 2 adjacent barangays located at 7 and 8.5 km, respectively, from the town center of Dumangas
- ❑ A large portion of land in these areas is allotted to inland aquaculture (milkfish culture)

III. Results and Discussion, cont'd.

3.2. Profile of respondents

- ❑ 54% of the resp. are women; 46% are men
- ❑ 79% of the resp. are married; average number of children is 4
- ❑ Ave. age of resp. is 48 years old
- ❑ Ave. number of household members is 5
- ❑ 79% of resp. are w/n 21-60 years old → economically productive
- ❑ Ave. number of years of stay is 36 years
- ❑ Most of the women are Elementary graduate (29.2%) while most of the men are High-school graduate (23.6%)
- ❑ Ave. monthly income is PhP3,448 (PhP41,376/yr ~ **USD1008**)
- ❑ Men earn more (PhP4,279/mo ~ **USD104**) than women (PhP2,744/mo ~ **USD67**)

The poorest of the poor are the indigenous peoples, small-scale farmers who cultivate land received through agrarian reform, landless workers, fishers, people in upland areas and women (IFAD, 2013)

III. Results and Discussion, cont'd.



- Primary sources of income include farming, fishing and casual labor (e.g. carpentry, laundry, etc.)
- Majority of the women (21%) are into farming while men (22%) are into casual labor
- 11% of the women respondents reported raising backyard animals
- 14% of the women also mentioned receiving remittance from family members
- All of the male respondents reported having primary income source; 17% of the women interviewed rely on their husband's earnings to support the needs of their family

In general, women represent the majority of low-income earners. They are imprisoned in cycles of dependency and have to fight each day to maintain their household and take care of their families (Kurukulasuriya and Rosenthal, 2003)

III. Results and Discussion, cont'd.

3.3. Impact of Typhoon Frank

- ❑ 81% of the HHs in Brgy. Bantud Fabrica and 59% from Brgy. Cayos were affected by the flood
- ❑ 64 damaged house; 111 families displaced
- ❑ Damages/losses were categorized into: (1) household property and appliances, (2) agricultural lands and animals, and (3) loss of livelihood
- ❑ Value of the damages/losses incurred across the 3 categories was estimated at an ave. of PhP12,318, which is ~30% of the reported annual income per household
- ❑ The highest amount of damage was on livelihood (PhP17,909)
- ❑ It took the families 41 days to recover

FAO (2003) estimated a 75-100% financial loss in fishing and agriculture due to the frequent occurrence of climate-induced hazards in communities traversed by the Jalaur River

III. Results and Discussion, cont'd.

3.4. How gender roles inside and outside the HH are affected during typhoon and flooding

- Although most of the HH chores are a shared responsibility between women and men, a higher percentage of women (57.4% & 35.6%) do the HH chores compared to their men counterpart
- Time spent for HH chores largely depend on the size of the family
- Women and men respondents found it difficult to do their usual HH chores because they did not have access to basic services like clean water and food
- Having a sick family member adds burden to the family, esp. on the mother
- Flood immobilized them – caused failure of their livelihood activities; they just wait for aid from the government
- Women and men help each other during crisis; they do what is necessary for survival

III. Results and Discussion, cont'd.

3.5. Adaptation strategies *[oriented towards longer-term livelihood security]* (CARE, 2009)

- ↑ % of women cited strengthening of dwelling units, transfer of household member to evacuation area, tree planting, and securing of household belongings
- Men reported managerial and behavioral strategies like relocation to safer place permanently, resorting to other income sources, and “being alert always”
- Men were also the ones involved in the improvement of canal/dike system, securing farmed animals, and facilitating coordination with leaders in the community



III. Results and Discussion, cont'd.

3.6. Coping mechanisms [*short-term and immediate; oriented towards survival*] (CARE, 2009)

- Getting a loan is the coping mechanism most cited by the resp.

Weather-related shocks exacerbate the seasonal and income gaps which are often (where available) bridged by loans from different sources with varying interest rates (FAO, 2003)

- Lending groups served as good sources of credit to finance unexpected expenses (e.g. house repair, medical expenses, purchase of seedlings)
- Credit come also in the form of goods (e.g. rice, canned goods)
- Women resp. are more likely to seek financial assistance from money lenders compared to the men



III. Results and Discussion, cont'd.

3.6. Coping mechanisms

- ❑ Livelihood/income diversification is another notable economic adjustment identified by the respondents
- ❑ Majority of the women (94%) mentioned having other income sources (e.g sari-sari store business, pamugon, laundry)

While women are generally more vulnerable to impacts of climate change, in many cases they exhibit surprising resilience (Lambrou and Piana, 2006)

- ❑ Agriculture-based activities and backyard animal-raising is the alternative livelihood most cited by the respondents



III. Results and Discussion, cont'd.

3.6. Coping mechanisms

- ❑ Evacuate to safer grounds (school bldg., gymnasium)
- ❑ Meal and diet adjustments
- ❑ Relief goods from the NGOs and GOs
- ❑ Collect metal and plastic scraps to be sold per kilo in junk shops
- ❑ Monitor advisories from the local leaders; also news from radio and TV



Conclusion and recommendation

- ❑ Typhoon and flood rendered the women and men respondents displaced, indebted to lending entities and institutions and unable to return to their livelihood activities thus reducing their capacity to provide for their family needs for months
- ❑ Both women and men experienced the adverse effects brought by typhoon and flood; both also contributed to the recovery of their households and their community
- ❑ Women played an active role in ensuring the safety of their family and protecting household belongings while men exhibited facilitation, managerial and behavioral strategies
- ❑ No significant difference in the responses of women and men; failure in the performance of gender roles in and outside the HH due to the flood

Conclusion and recomm., cont'd.

- ❑ Women played an important role in the recovery of their household through income diversification
- ❑ Additional and alternative income sources are vulnerable to climatic hazards
- ❑ Need for affordable credit lines that can be provided by both private and government sectors at affordable rates
- ❑ Initiatives at the LGU level should look deeper into the livelihood dynamics of their people to ensure effective recovery program – draw on the skills, knowledge, resources and experiences of both genders

Acknowledgment

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