

GENDER DIMENSIONS OF DISASTER MANAGEMENT:

Implications for Coastal Aquaculture and Fishing Communities in the Philippines

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AQUACULTURE & FISHERIES + DISASTER + GENDER

- Small-scale aquaculture and fisheries play an increasingly important role in contributing to better nutrition and food security. However, these practices are vulnerable to severe weather and many nations that invest in fisheries and aquaculture are subject to frequent typhoons.
- In 2013, the Philippines faced the largest storm to ever hit land¹². Typhoon Haiyan (Yolanda) affected an archipelago of low-lying islands with a population dependent on its surrounding natural resources. One year later, Typhoon Hagupit made landfall.
- The literature suggests that women are treated differently at all stages of disaster; from the initial warning period to the relief and recovery period^{4,7}.
- The Asia Pacific Economic Cooperation's (APEC) study on gender integration in disaster management in the Philippines, Thailand, Indonesia, and Japan revealed gaps in every phase of disaster management, and the status of gender integration in disaster management in the Philippines has yet to be re-evaluated¹⁰.
- This research conducted a follow-up analysis of the APEC study in order to assess how gender integration in disaster management has changed since 2009, with a goal of providing updated information to improve decision making in the future.

PHILIPPINES AND TYPHOONS:

- The Philippines suffers more natural hazards (e.g. earthquakes, volcanic eruptions, typhoons, floods, etc.) than any other country³.
- 29 million Filipinos (36% of the population) depend on agriculture and fishing to make a living.8

Typhoon Haiyan (Yolanda) 2013:

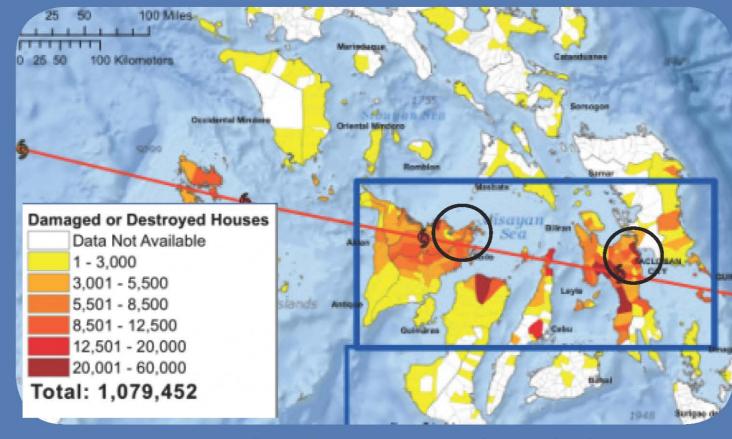


Figure 1. The typhoon's trajectory through the Visayas region of the Philippines, from east to west. Provinces are color coded according to the number of damaged nomes⁵. Black circles indicate study focus areas.

TYPHOON HAGUPIT (RUBY) 2014:

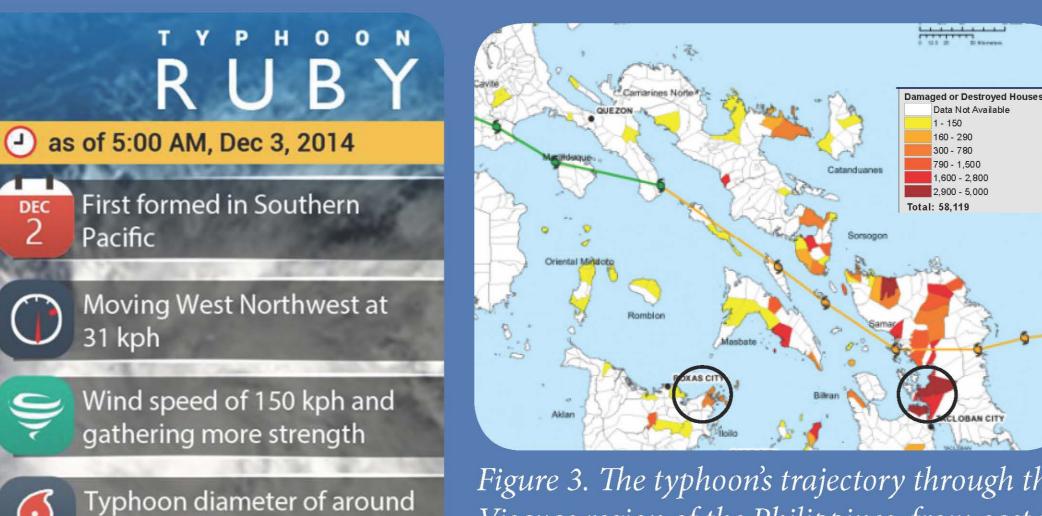


Figure 3. The typhoon's trajectory through the Visayas region of the Philippines, from east to west. Provinces are color coded according to the number of damaged homes⁶. Black circles indicate study focus areas.

GENDER VULNERABILITIES:

- Mortality rates for women from disasters are often higher than those for men. Women also live at **two times** the poverty rate of men⁴.
- Although they are vulnerable, women are successful at leading emergency committees and aiding

in disaster management -when given the opportunity.

FISHERIES, DISASTER MANAGEMENT, AND GENDER-RELEVANT LEGISLATION IN THE PHILIPPINES:

Republic Act No. 8550 is one of the first major pieces of legislation to recognize gender differences in fisheries and aquaculture. It required the formal recognition of women who are directly and indirectly engaged in fisheries¹.

Three-year Framework Plan for Women was passed in 2001, which provided guidelines on methods for preparing gender and development plans.

Figure 2. A schematic produced by PAGASA, NASA and the Joint

Typhoon Warning Center (JTWC) comparing super typhoons in

YOLANDA

Super Typhoon Haiyan

(Yolanda) entered PAR

Super Typhoon Haiyan

Maximum strength of 235 kph

Typhoon diameter of aroun

Philippine Area of Responsibility (PAR).

(Yolanda) left PAR

600 kilometers

APEC conducted a study **examining the** status of gender integration in disaster management in the Philippines.

The Philippines Disaster Risk Reduction and Management Act was passed in 2010 which aims to "ensure that disaster risk reduction and climate change measures are **gender responsive...**"9.

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METHODOLOGY:

- An in-depth review of current and past literature on gender integration in disaster management in fishing and aquaculture communities;
- Secondary data collected for data triangulation;
- 28 Semi-structured interviews
 - The interviewees were selected via **snowball** sampling².
 - 17 women and 11 men were interviewed.

	Disaster Management	Fisheries/ aquaculture	Women's empowerment	Total
International	3	1		4
National	4	1	1	6
Provincial	2	6	1	9
Municipal	2	5	2	9
Total	11	13	4	28

Table 1. Breakdown of interview respondents by sector and scale of governance.

RESULTS: GENERAL TRENDS IN RESPONSES

BY SCALE: "Agencies are now "He gets the registration.. but what about the women particularly aware of what **National** who don't have a husband...even women themselves n=6 is gender and development. don't consider themselves as women fishers... they Respondents focused on how Need to develop a culture of Unlike before, they were in far the nation has progressed were socialized to think they are only in support..." • Expressed a need for childpreparedness by increasing denial..." and women-friendly spaces awareness, focus more on in evacuation centers as well reconstruction, and coordinate as more support for women's communication for warning "There is no formal link [of] gender Provincial n=9 concerns with DRR. What's lacking Provincial n=9 Respondents focused on legislation and involvement right now is how to apply a gender Need to mainstream DRR with other government programs, of the entire community in disaster management, linking climate change and disaster management, and improving including women lens.' rapid needs assessment timing, delivery of implementation funds, and coordination of warning systems Municipal "Seaweeds project is very Municipal successful, where in the Women's roles in the DRRMCs and recipients Should focus on shifting efforts towards rehabilitation, increasing the number women have the primary role of aid assistance of trainings for the public and disaster risk reduction council members, and methods for improving communication and storage facilities for municipal in management."

Figure 4. Breakdown of response trends according to perceived level of gender integration.

Figure 5. Breakdown of response trends according to areas for improvement for disaster management.



By SECTOR:

	Level of gender integration	Areas for improvement for disaster management
Disaster Management	Respondents' main concerns are the conditions at evacuation centers.	 Disaster managers feel there needs to be: A more substantial shift in focus toward rehabilitation; Improved functions of the disaster risk reduction management councils; Better integration of preparedness into the school system; Better provisions for reconstruction efforts; and A more coordinated information processing and record keeping.
Fisheries and aquaculture	Respondents in fisheries and aquaculture said they work to build capacity of women fishers through livelihood projects and facilitate international aid funds for womentargeted programs.	Fisheries and aquaculture respondents felt the main areas of improvement in DRR include: awareness, facilities, preparation, implementation of laws, better storage facilities for fish, and communication.

Table 2. Breakdown of response trends according to areas for improvement for disaster management and level of gender integration

1. Anda, G.M. 2014. Rebuilding Fishing Communities and Fisheries, Post-Haiyan reconstruction in the Philippines. Retrieved from www.oxfam.org/en/research/rebuilding-fishing-communities 2. Atkinson, R. and J. Flint. 2004. Snowball Sampling. In Lewis-Beck, M.S., A. Bryman, and T. Futing (Eds.). The Sage Encyclopedia of Social Science Research Methods. Thousand Oaks, CA:

3. Bankoff, G. 2003b. Constructing vulnerability: the historical, natural, and social generation of flooding in Metropolitan Manila. Disasters 27(3): 224-238. 4. Enarson, E. 1998. Through Women's Eyes: A Gendered Research Agenda for Disaster Social Science. Disasters 22(2): 157-173. 5. Pacific Disaster Center. 2014. Reliefweb.int. Philippnes: Number of Damaged Houses. Retrieved from http://reliefweb.int/map/philippines/philippines-number-damaged-houses-typhoon-

9. Republic Act No. 10121 Philippine Disaster Risk Reduction and Management Act of 2010 (PDRRMA) S. No 3086 11 No 6985. Republic of the Philippines, Congress of the Philippines Metro

10. Women in Times of Disaster: The Integration of Gender Issues and Gender Perspectives in Disaster Management. 2009. Gender Integration in Disaster Management: Philippines. Asia-Pacific

haiyan-yolanda-25-november-2013 6. Pacific Disaster Center. 2013. Reliefweb.int. Philippines: Number of Damaged Houses. Retrieved from http://reliefweb.int/map/philippines/philippines-number-damaged-houses-typhoonhagupit-ruby-based-information-ndrrmc-0 7. Ikeda, K. 1995. Gender differences in human loss and vulnerability in natural disasters: A case study from Bangladesh. Indian Journal of Gender Studies 2(2): 171-93

Economic Cooperation 11. Photo courtesy of the AquaFish Innovation Lab. 12. Typhoon Haiyan/Yolanda Fact Sheet #22. 21 April 2014. USAID. Retrieved from http://www.usaid.gov/haiyan/fy14/fs22.

8. National Statistics Coordination Board 2005. Sectoral statistics: poverty statistics. Philippines.

AFS Portland, OR 2015