GENDER DIMENSIONS OF DISASTER MANAGEMENT:

Building Resilience for Coastal Aquaculture and Fishing Communities in the Philippines

Morgan Chow* and Hillary Egna

Feed the Future Innovation Lab for Collaborative Research on Aquaculture & Fisheries Oregon State University, Corvallis, OR 97330 morgan.chow@oregonstate.edu

PINES

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 land**¹². **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}.

PHILIPPINES AND TYPHOONS:

- The Philippines suffers more natural hazards (e.g. earthquakes, volcanic eruptions, typhoons, floods, etc.) than any other country³.
- 2 the ag liv

• 29 million Filipinos (36% of the population) **depend on agriculture and fishing** to make a living.⁸

SUPER TYPHOON RUBY O as of 5:00 AM, Dec 3, 2014 Super Typhoon Haiyan (Yolanda) entered PAR Super Typhoon Haiyan (Yolanda) left PAR Maximum strength of 235 kph winds in Nov 8 Wind speed of 150 kph and gathering more strength

Figure 2. A schematic produced by PAGASA, NASA and the Joint Typhoon Warning Center (JTWC) comparing super typhoons in Philippine Area of Responsibility (PAR).

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.

• 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

• 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

of disaster management, and the status of gender integration in disaster management in the



Typhoon Hagupit (Ruby) 2014:

Typhoon Haiyan (Yolanda) 2013:

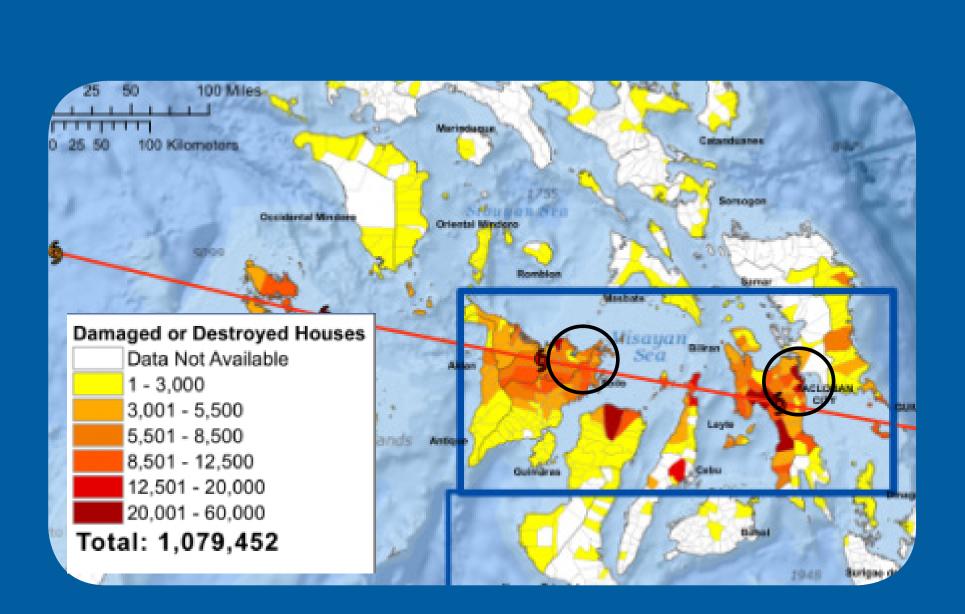


Figure 1. The typhoon's trajectory through the Visayas region of the Philippines, from east to west. Provinces are color coded according to the number of damaged homes⁵. Black circles indicate study focus areas.

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

Typhoon diameter of around

600 kilometers

- The interviewees were selected via **snowball sampling**².
- 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.

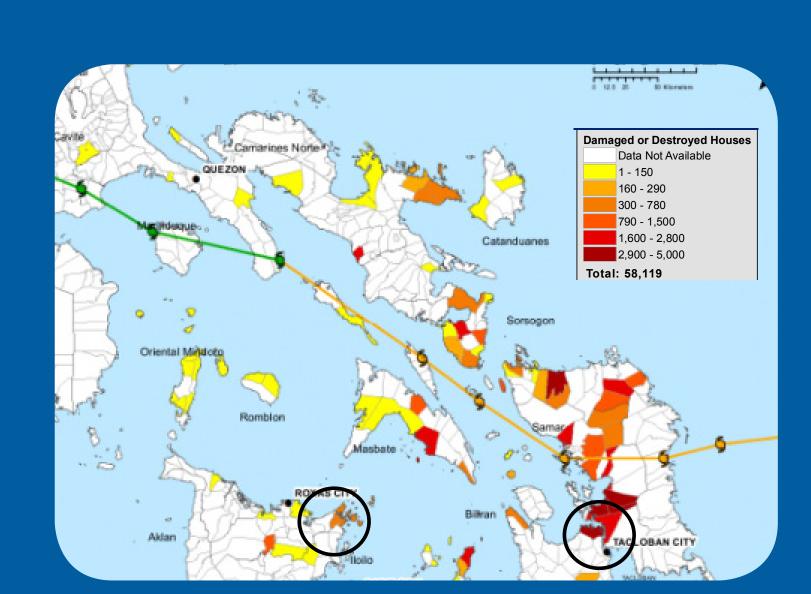


Figure 3. The typhoon's trajectory through the Visayas region of the Philippines, from east to west. Provinces are color coded according to the number of damaged homes⁶. Black circles indicate study focus areas.

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.

1998

"Agencies are now

particularly aware of what

is gender and development.

Unlike before, they were in

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

2001.....

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

Philippines has yet to be re-evaluated¹⁰.

Typhoon diameter of around

information to improve decision making in the future.

2009

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.

2010.....

RESULTS: GENERAL TRENDS IN RESPONSES

"He gets the registration.. but what about the women who don't have a husband...even women themselves don't consider themselves as women fishers... they

denial..."

and women-friendly spaces in evacuation centers as well as more support for women's groups

Provincial n=9

Respondents focused on legislation and involvement of the entire community in disaster management, including women

Municipal
n=9

Women's roles in the DRRMCs and recipients
of aid assistance

W

"There is no formal link [of] gender concerns with DRR. What's lacking right now is how to apply a gender lens."

"Seaweeds project is very successful, where in the women have the primary role in management."

Municipal
n=9

Should focus on shifting efforts towards rehabilitation, increasing the number of trainings for the public and disaster risk reduction council members, and methods for improving communication and storage facilities for municipal

National

Need to develop a culture of

awareness, focus more on

communication for warning

Provincial n=9

linking climate change and disaster management, and improving

rapid needs assessment timing, delivery of implementation funds,

Need to mainstream DRR with other government programs,

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

National

n=6

Respondents focused on how

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

and coordination of warning systems

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.

REFERENCES: rries, Post-Haiyan reconstruction

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-and-fisheries.
 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: Sage. 1044-045. Print.
 Bankoff, G. 2003b. Constructing vulnerability: the historical, natural, and social generation of flooding in Metropolitan Manila. Disasters 27(3): 224-238.
 Enarson, E. 1998. Through Women's Eyes: A Gendered Research Agenda for Disaster Social Science. Disasters 22(2): 157-173.
 Pacific Disaster Center. 2014. Reliefweb.int. Philippines: Number of Damaged Houses. Retrieved from http://reliefweb.int/map/philippines/philippines-number-damaged-houses-typhoon-haiyan-yolanda-25-november-2013
 Pacific Disaster Center. 2013. Reliefweb.int. Philippines: Number of Damaged Houses. Retrieved from http://reliefweb.int/map/philippines/philippines-number-damaged-houses-typhoon-hagupit-ruby-based-information-ndrrmc-0

93.
8. National Statistics Coordination Board 2005. Sectoral statistics: poverty statistics. Philippines.
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 Manila Fourteenth Congress Third Regular Session.
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 Economic Cooperation.

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-

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.

The AquaFish Innovation Lab is supported in part by United States Agency for International Development (USAID) Cooperative Agreement No. EPP-A-00-06-00012-00 and by contributions from participating institutions. This study was