

Gender and Fisheries Conference

Session 2: Gender and climate change:  
navigating the impacts on fisheries and aquaculture  
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# **FISHING FROM THE MARGINS:**

An intersectional analysis of gender and social capital in understanding adaptive capacities and climate change vulnerabilities of women fishers in the Philippines

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- 

# Introduction



## State of the fisheries

- The diversity of reefs and coastal habitats contributes to the fishery production in the Philippines (Alino, et al. 2004)
- Globally, the Philippines contributes 4.41 Million MT of fisheries products, with 26% from the municipal fisheries (BFAR, 2022).

## State of the natural resources

- Decline of coastal and marine resources due to overfishing and destructive methods, and alteration of natural habitats in favor of urbanization and industrialization (Tolentino-Zondervan, et al 2022, Graziano, 2014; Naz, 2010; DENR, 2010)
- The Philippines is one of the most affected as one of the most vulnerable countries to climate change not only because of climate-related disasters but due to high dependence on fisheries resources. (Ding, et al 2017; Vassuer, et al, 2015; Denton, 2004).

## Women and fisheries

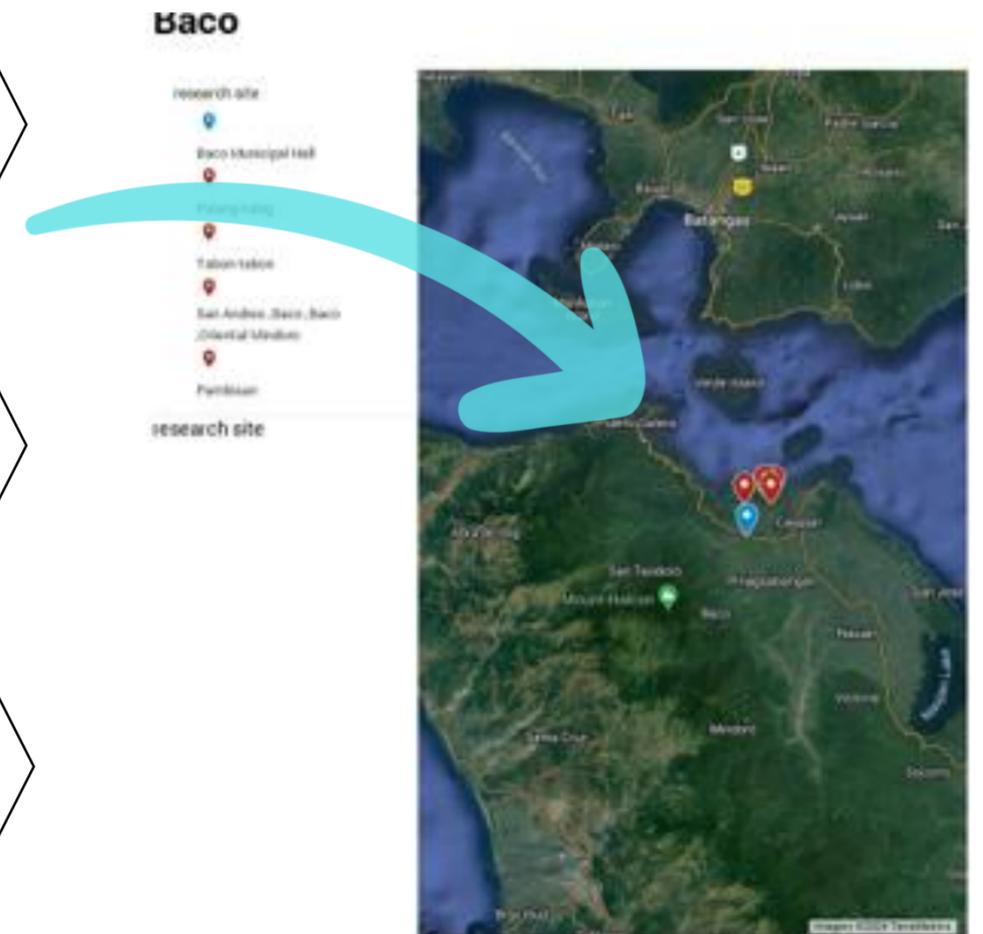
- In fisheries, due to limited quantitative gender disaggregate women continue to be underreported and undervalued (Kleiber, et al, 2015; Purcell, et al 2016).
- Existing inequalities, social conditions and gendered divisions increase women's vulnerabilities (Dalisay, 2018; Granziano, 2014)

# Site information: Baco, Oriental Mindoro, Philippines



Figure 3. Administrative map of the Province of Oriental Mindoro

- 3rd class municipality; with a total population of 39,817 (2020 PSA)  
• 6 coastal barangays
- farming, fishing and commerce as major economic activities  
• Fishing gears: hook and line, gill nets, spears & corrals.
- Observed gender issues: VAW, inadequate funds for GAD programs, lack of skills training for women, lack of awareness and education on women's health (Baco CDP 2017-2020)





# *Research objectives*

This research aims to **understand the vulnerabilities of the fishery sector to the impacts of climate change** through an intersectional analysis of the adaptive capacity of women as influenced by their social capital.

Specific objectives are:

1. To **understand the ecological, social and economic factors contributing to climate change vulnerabilities** of the fisheries sector based on women's experiences as fishers.
  2. To **determine the adaptive capacity of the fisheries sector** based on women's experiences and knowledge.
  3. To **analyze how social capital affects women's** adaptive capacities and vulnerabilities to climate change.
  4. To recommend **gender-responsive adaptation policies and actions** for coastal fishing communities particularly for women fishers.
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# *Review of literature*

## *Women in fisheries*

- Women usually play a **central role in other processes such as net-mending, sorting, marketing, and processing**
- **Women's fishing activities are still directed by their household roles, dangers and risks**
- **Women remain a hidden workforce in fisheries**

## *Gender dynamics in the sector*

- Women's traditional reproductive roles include **maintaining the household and caring for the family determines women's access to certain ecosystems or specific fishing activities**
- **Perceived benefits including expansion of networks, livelihood, and health are key factors to women's participation in community work.**

## *Adaptive strategies*

- State of the resources affects household survival strategies.
- Family members adapt by **switching gender roles and going against traditions** for survival
- **women's critical role in developing livelihood strategies** to augment household income during times of economic and natural calamities.
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# *Intersectionality in fisheries and climate change*

- Intersectionality argues that a single-axis framework in feminism only highlights the **privileged class of women's experiences if other factors such as race, and class are not considered in the analysis**
- In fisheries or any socio-ecological system, an individual's position in society is a result of the **interaction of social, cultural, political, and economic structures**.
- Climate risks are further aggravated by socio-economic drivers caused by religion and ethnicity that resulted in increased displacements, loss and damage, and gender inequality.

# IPCC vulnerability assessment framework

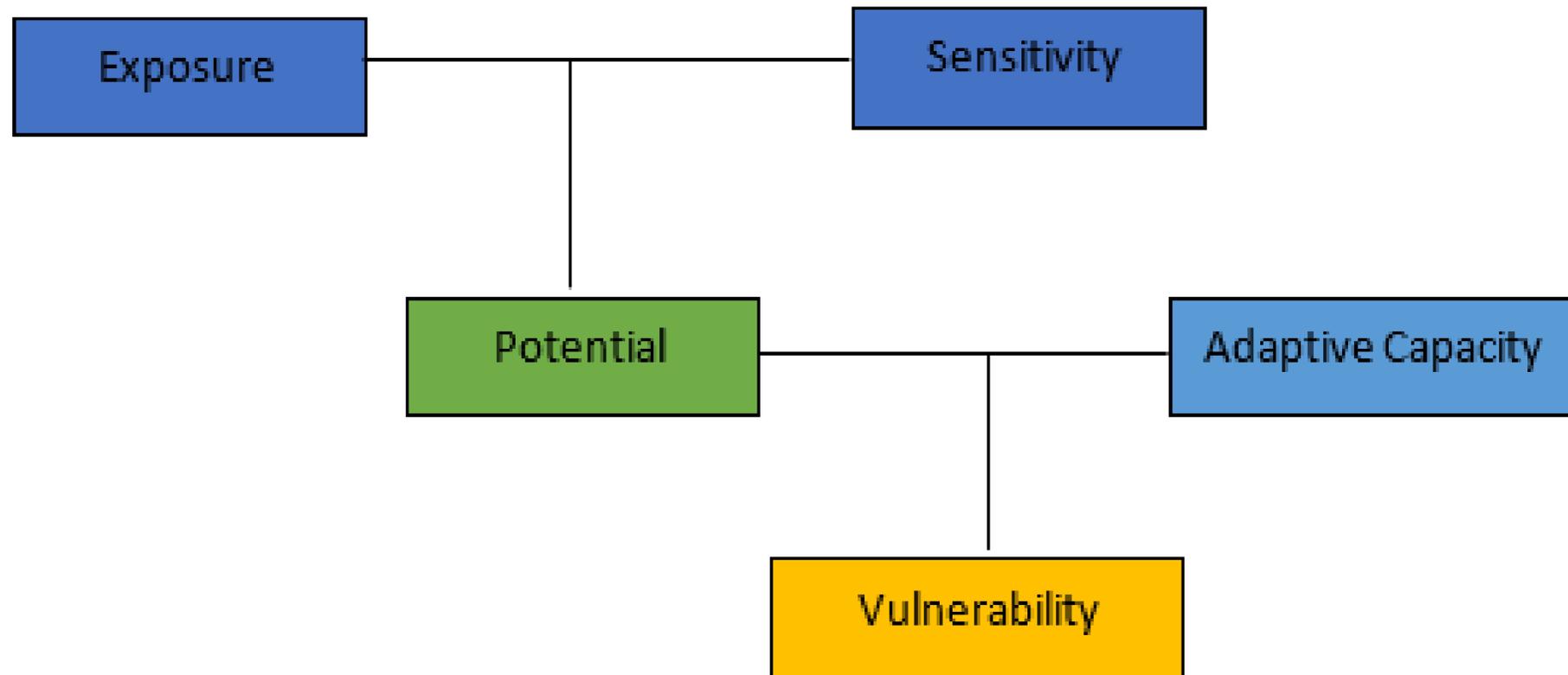
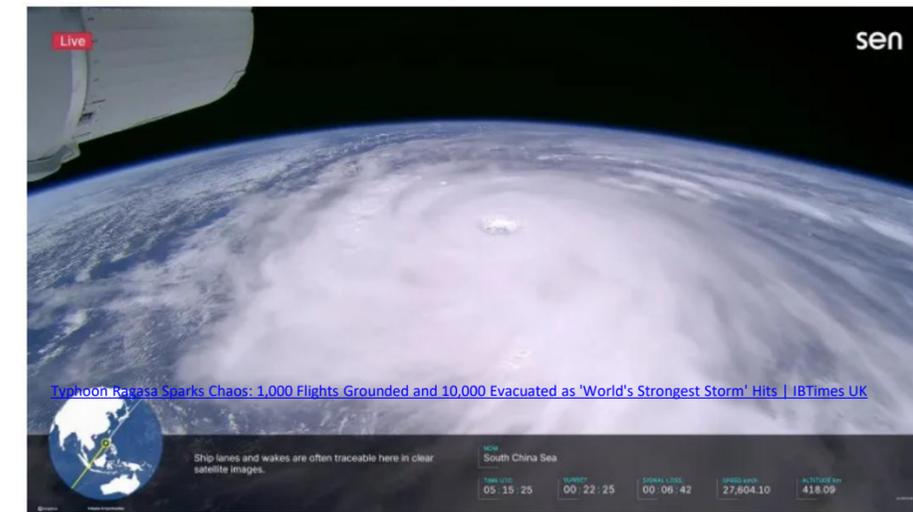


Figure 1. Vulnerability as a function of exposure, sensitivity, and adaptive capacity



[Storm sets off floods and landslides in Philippines, leaving at least 14 dead](#)



[Typhoon Ragasa Sparks Chaos: 1,000 Flights Grounded and 10,000 Evacuated as 'World's Strongest Storm' Hits | IBTimes UK](#)

Super Typhoon Ragasa seen from the International Space Station (PHOTO: X/KACPERWX)



[ZSL Philippines 2.jpg.webp \(876x655\)](#)

# *Analytical framework on the adaptive capacity*

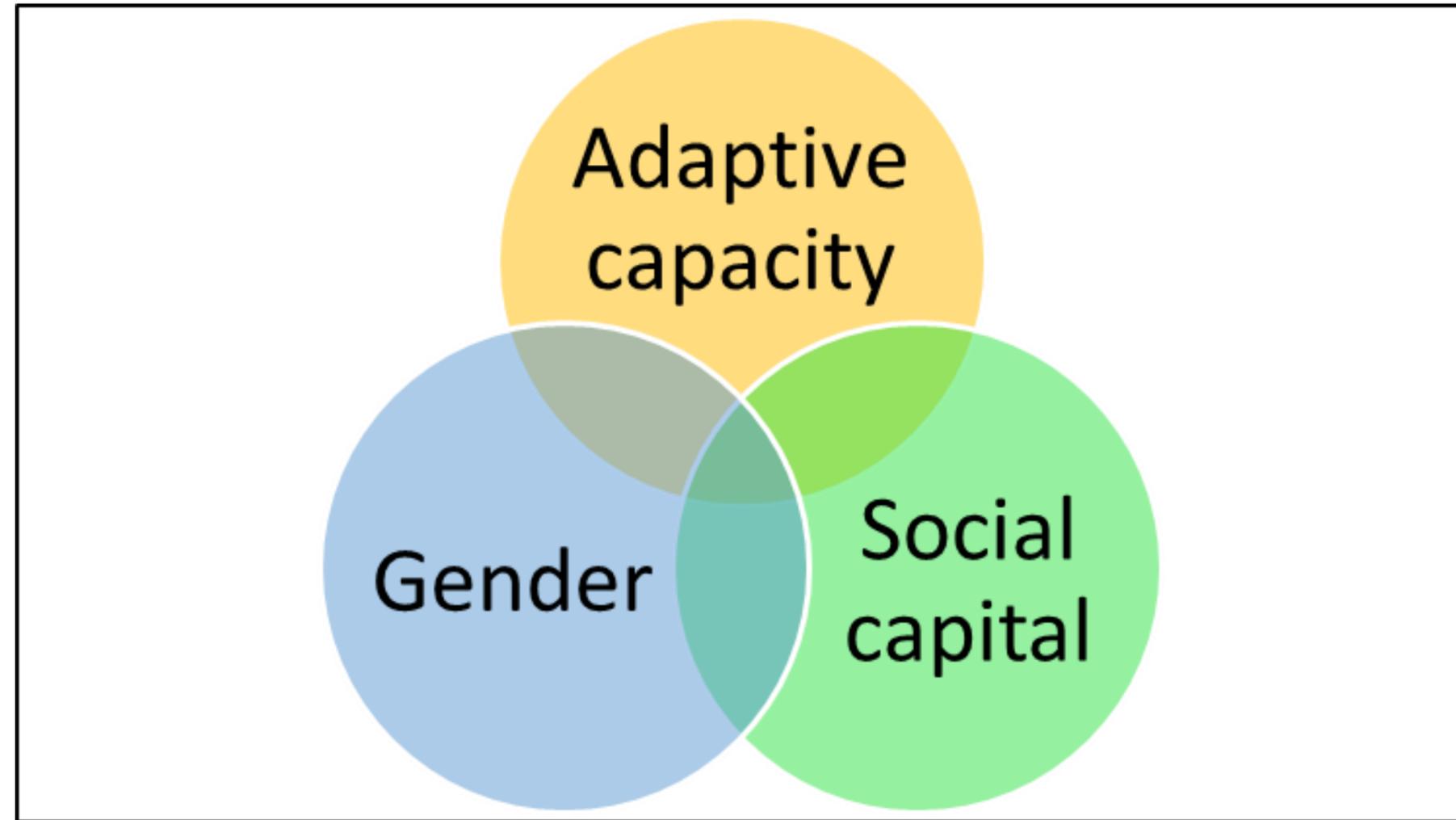
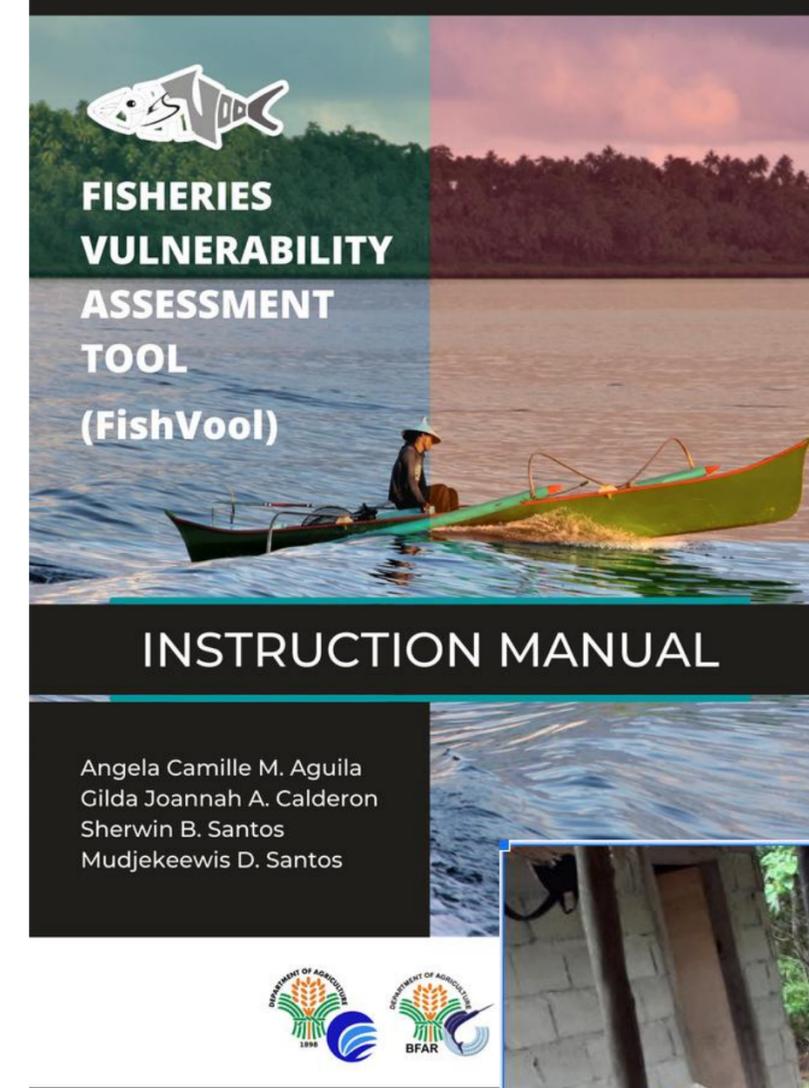


Figure 2: Understanding how gender and social capital affects the adaptive capacities of women fishers in a rural coastal community to the potential impacts to climate change

# Research design

## Documenting women's narratives, experiences, and knowledge on Fisheries and climate change.

- Fisheries Vulnerability Assessment Tool (Fish VOOL) survey
- Focus group discussions
- Semi-structured interviews
- Key informant interviews
- Secondary data gathering



# Institutional partnerships and data sampling

- Site selection - familiarity, consultation with institutions and hosts, existing network
- Survey - 33 women, 24-29 May 2019
  - Purposive sampling: female, fishers, and residents of the coastal barangays of Baco
  - Willingness to participate
- FGDs - 2 groups, 10 pax
  - members of SAMA BPSK
  - 4Ps Beneficiary
- Semi-structured interviews - based on interaction, and recommendation.
- Secondary data gathering (policy documents on climate change and fisheries of the Provincial and Local government units)



Samahan ng Barangay  
Pulantubig na Sumusuporta sa  
Pangangalaga ng Kalikasan  
(SAMA-BPSK)

Baco Bantay-Dagat

# Results

## *Provincial vulnerability assessment of Baco*

Sea level rise		Tropical cyclones & storm surge		Sea surface temperature increase	
Vulnerability Index	Vulnerability Category	Vulnerability Index	Vulnerability Category	Vulnerability Index	Vulnerability Category
.49	Moderate	.61	High	.45	Moderate

Table 3: Vulnerability indices and categories of the Baco fisheries sector from the Oriental Mindoro Disaster Risk/Climate Change adaptation and vulnerability assessment report.

### *Coastal & marine sector*

Storm surge		Sea level rise		Sea surface temperature increase		Watershed runoff	
Vulnerability Index	Vulnerability Category	Vulnerability Index	Vulnerability Category	Vulnerability Index	Vulnerability Category	Vulnerability Index	Vulnerability Category
.33	Low	.56	Moderate	.65	High	.49	Moderate

Table 4: Vulnerability indices and categories of the Baco coastal and marine sector from the Oriental Mindoro Disaster Risk/Climate Change adaptation and vulnerability assessment report.

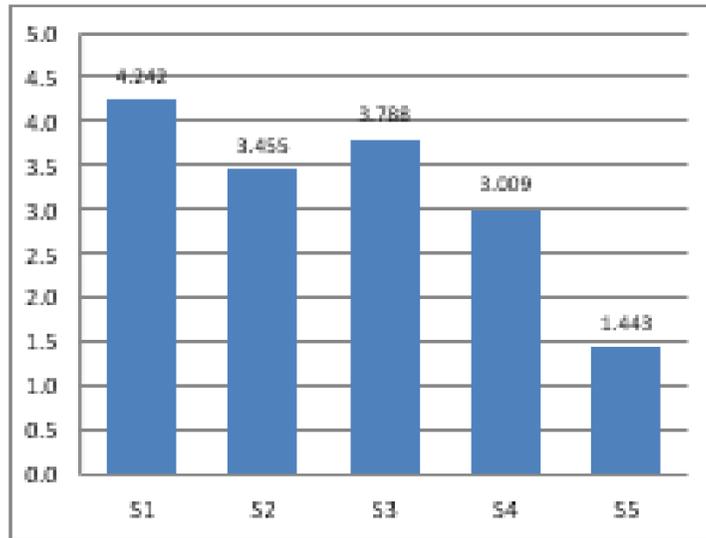
Oriental Mindoro Provincial Disaster Risk/Climate Change Adaptation and Vulnerability Report computed vulnerability indices for the fisheries, and coastal and marine sectors of Baco.

# Fisheries vulnerability tool (FishVool)

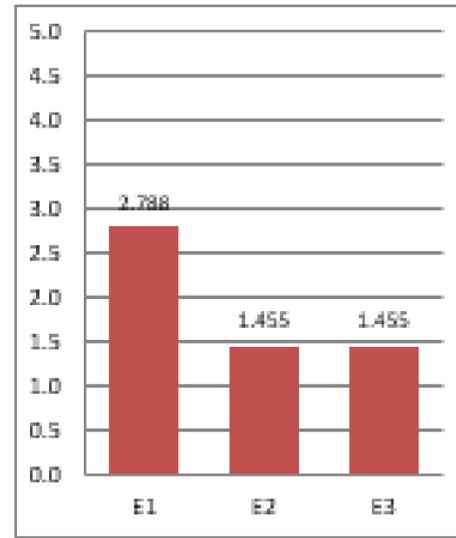
## Data Results

### Average Values for the Different Assessment Factors

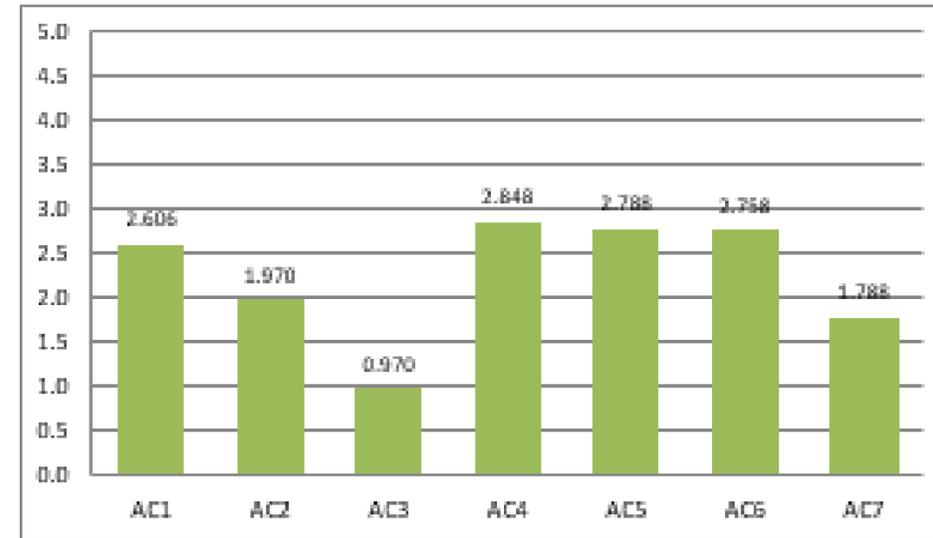
Sensitivity				
S1	S2	S3	S4	S5
4.242	3.455	3.788	3.009	1.443



Exposure		
E1	E2	E3
2.788	1.455	1.455



Adaptive Capacity						
AC1	AC2	AC3	AC4	AC5	AC6	AC7
2.606	1.970	0.970	2.848	2.788	2.758	1.788



Overall Average Assessment Value:		
Sensitivity	3.187	M
Exposure	1.899	L
Adaptive Capacity	2.247	M

POTENTIAL IMPACT				
EXPOSURE	SENSITIVITY			
		L	M	H
	L	L	L	M
	M	L	M	H
H	M	H	H	

Potential Impact | L

VULNERABILITY				
POTENTIAL IMPACT	ADAPTIVE CAPACITY			
		L	M	H
	L	M	L	L
	M	H	M	L
H	H	H	M	

Vulnerability | L

Name of Surveyor:	Marion Daclan/JC Manongsong
Name of Data Encoder:	Marion Daclan/ JC Manongsong
Period of Data Gathering:	24 - 28 May 2019

# Gender roles in Baco fisheries

- Women play significant roles in pre- and post-harvesting activities.
- The target species are small pelagics, some women reported gleaning and selling shellfish.
- Unsold fish catch were either smoked or dried for household consumption or for exchange for other goods.
- Women without affiliations or organization did not report access to community projects, loans or insurance.
- Women rely on relatives or immediate family for assistance during times of emergencies or disasters.

Fishing activities	Household members		
	Wife	Husband	Children
- Preparing the fishing gears: net, boat			
- Preparing food			
- Other pre-harvest chores: fix light, carry gears, prepare bait			
<b>Fishing</b>			
- gleaning			
- fishing at the open sea			
<b>Post-harvest</b>			
- fish selling at the landing site			
- vending (paglalako)			
- drying/smoking			
Boat maintenance/ gear-mending			

Legend:	
	Supporting role (provide suggestions, help in the process)
	Main role (makes the decision-making, provides instructions)

Figure 12: Representation of gender division of labor in fishing process in Baco, Oriental Mindoro.

# Gender and social capital elements in the adaptive capacity of Baco fishers

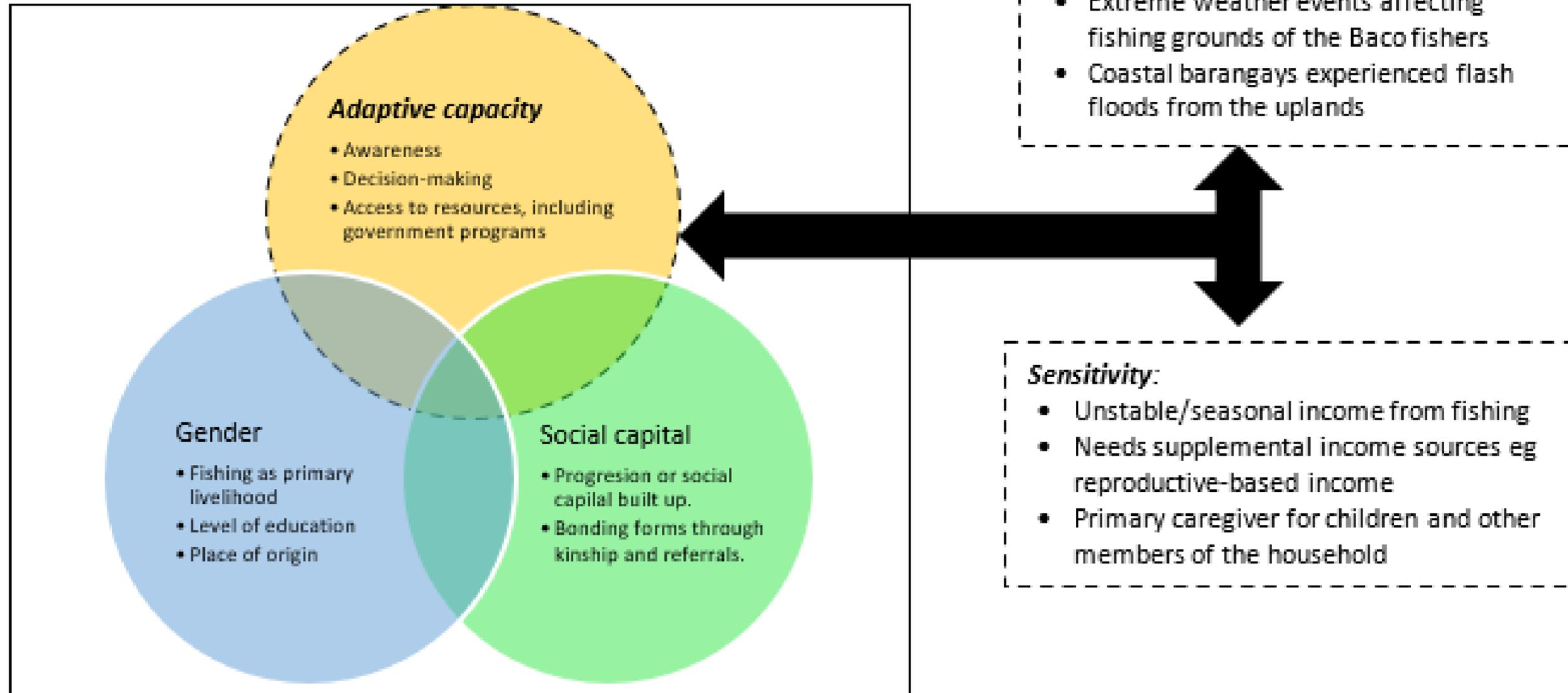


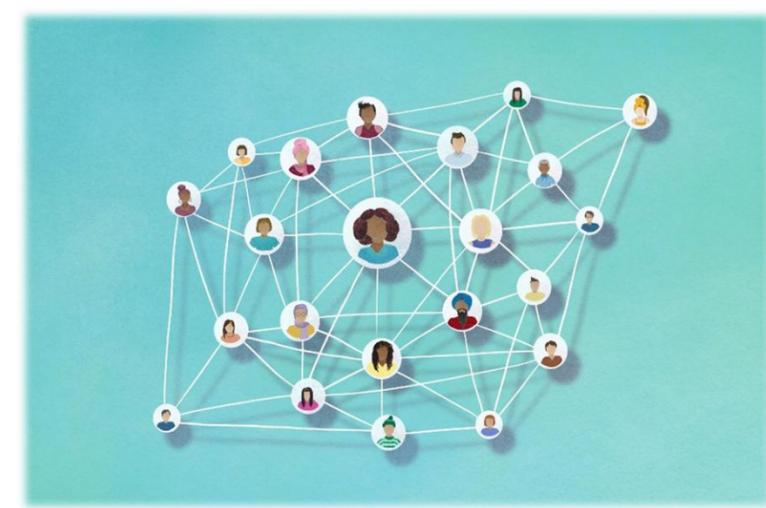
Figure 13: Gender and social capital elements that affect the adaptive capacity of fishers in a rural coastal community on the potential climate impacts based on the sector's exposure and sensitivity to climate hazards.

# Analysis

- The role of women in the fisheries sector is recognized by the government and the community.
- The women identified themselves as fishers as they play active roles in the different phases of the fishing process from preparations to post-harvest.
- The low vulnerability score in the FishVool does not exempt Baco from the potential impacts of climate change.
- The tolerance of gender stereotypes and unchallenged traditional roles in the fishing households and communities retain women's marginalized position in society and affects their adaptive capacity.
- The declining state of the fisheries resources, low income and lack of livelihood options limits the adaptive capacity of the sector,
- Women are considered as extensions of their husbands; they only get secondary access to resources and opportunities especially in relation to the fisheries sector.
- Social capital is accumulated over time, and the conditions for integration are usually more challenging for women who moved to the site for economic and marital reasons.



## *Intersect of gender and social capital in adaptive capacity*



- **Marital migration**
  - Traditionally women move to their husband's hometown, thus losing their access to their existing social networks.
- **Social network**
  - Women start from their husbands' familial ties to establish their social network.
  - Marriage to a local does not guarantee immediate acceptance unless their contribution to the community has been established.
- **Empowerment**
  - The women remain as proxies in the fisheries sector which limits access to capacity building opportunities.
  - Women who have taken up leadership roles use their network to support their neighbors.

# Conclusion

- Baco fisheries low vulnerability score due to low exposure from climate impacts such as sea level rise, and wave height, and disaster-response activities of the community.
- Traditional gender perspectives and beliefs continue to persist, the women know their negotiation powers.
- Women's fishing roles and efforts, determine the resources and opportunities that would be accessible to them. Their socio-economic backgrounds also influence the components of vulnerability, including length of residency.
- Women's experience show that their adaptive capacity is affected by their social capital.
- Social capital is accumulated over time, and the conditions for integration are usually more challenging for women who moved to the site for economic and marital reasons.
- Social networking through community organizations, government programs, and volunteering as Bantay Dagat is among the adaptation strategies of women to get access to benefits.

# Recommendations

- More **localized sectoral intersectional climate change vulnerability assessments** are needed, not only to keep up with finding appropriate adaptation solutions to the global climate emergency but also to shift interventions that could critically review the distribution of power and resources between women, men, and other genders.
- **Community-based climate and fishery research** are also needed to make global issues like climate change accessible and understandable to local communities. The studies should investigate conditions, and contexts of different marginalized and vulnerable sectors to develop more inclusive and diverse options for adaptation.
- Looking into **nature-based solutions for climate change adaptation**. Nature-based solutions use ecosystems for the benefit of the community in addressing issues such as climate change.
- A closer investigation of climate change vulnerabilities and risks is needed looking into **gender-based mobility for economic and disaster response** as part of the temporal and spatial analysis of vulnerability assessments.

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## FGD participants

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- Jessieca Carpacio
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- Marilyn M. Tabanera
- Shainne F. Evora
- Divina L. Evora
- Jackilyn A. Delgado
- Emma P. Maravilla
- Mary Joy G. Evora
- Rosemarie F. Imperial



**Thank you!**

**Maraming salamamat!**

