

# IMPACT OF MARINE PLASTICS IN FISHING COMMUNITIES

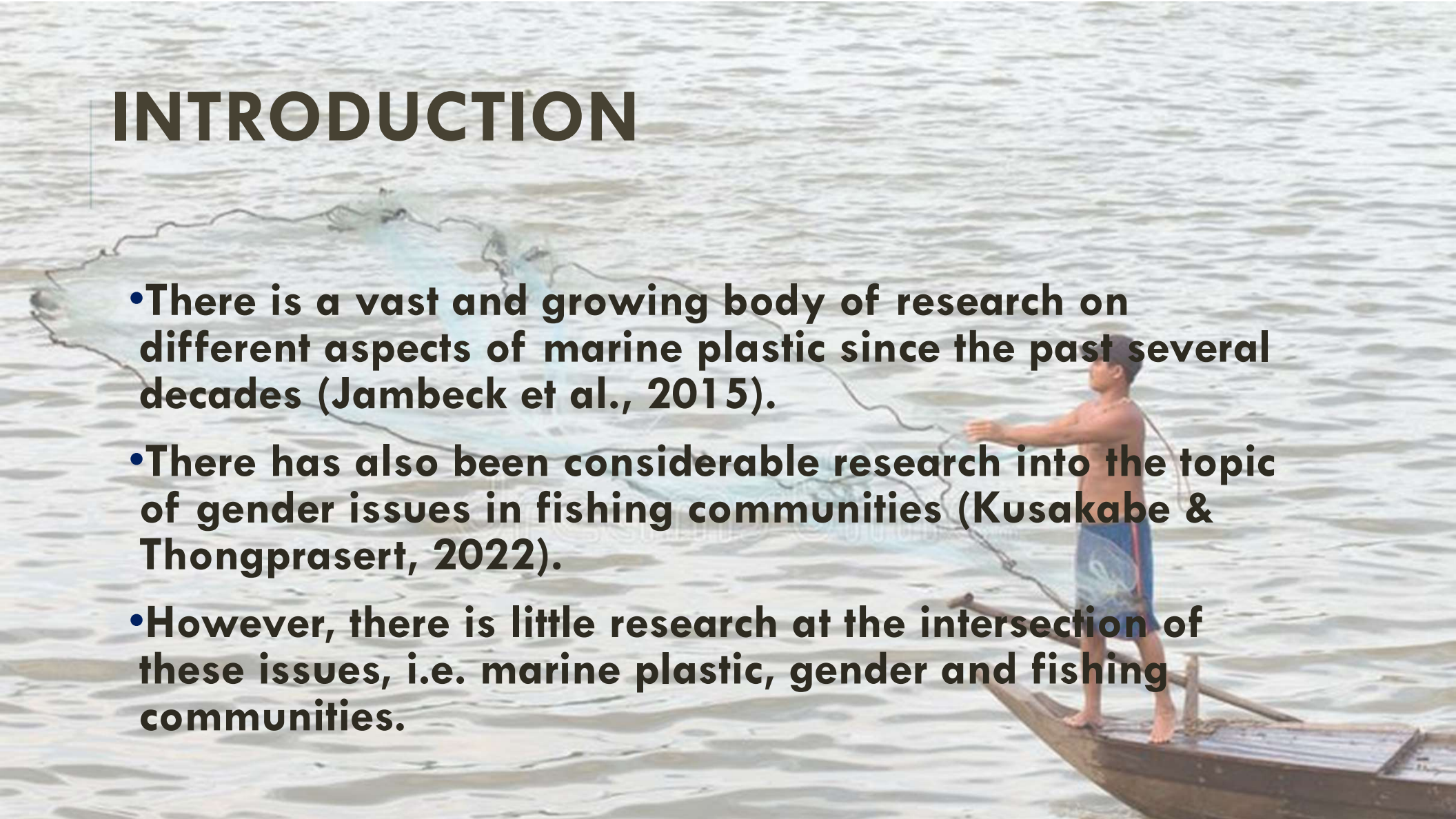
A GENDER ANALYSIS OF LIFE AND LIVELIHOOD

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# INTRODUCTION

- There is a vast and growing body of research on different aspects of marine plastic since the past several decades (Jambeck et al., 2015).
- There has also been considerable research into the topic of gender issues in fishing communities (Kusakabe & Thongprasert, 2022).
- However, there is little research at the intersection of these issues, i.e. marine plastic, gender and fishing communities.





# METHODOLOGY

A woman with dark hair, wearing a red patterned shirt, is sitting on a boat in a river. She is focused on mending a large, tangled fishing net that is spread out on the boat. The net is made of fine mesh and has several bright green floats attached to it. In the foreground, there is a white plastic bucket. The background shows the calm water of the river and lush green vegetation on the banks.

**We have conducted a literature review to identify upcoming gender issues in fishing communities due to marine plastic.**

**In the absence of any grassroots research on this topic, we have used literature from gender and fisheries and extrapolated from that to identify some upcoming issues on the basis of earlier research.**

**We will first present an overview of marine plastic, followed by a review of gender and fisheries in SE Asia. This will be followed by an identification of gender issues in fishing communities due to marine plastic.**



The background of the slide is a photograph of various pieces of plastic waste floating in the ocean. The items include clear plastic bottles, a yellow plastic container, a blue plastic tray, and several pieces of pink and purple plastic bags. The water is a clear, light blue color, and the overall scene illustrates the problem of marine plastic pollution.

# **MARINE PLASTICS: AN OVERVIEW**

- **About 8 million tons of plastic enter the oceans each year (Jambeck et al., 2015).**
- **About 50% of all plastic produced is for single use (Li et al., 2016).**
- **About 21.3% of plastic waste is recycled, 21.8% is incinerated, and 53.8% is discarded (UNEP, 2020).**
- **The cost of environmental damage to marine ecosystems caused by marine plastics is estimated at USD13 billion /year (UNEP, 2017).**

An underwater photograph showing various pieces of plastic waste floating in clear blue water. The items include a large white plastic bottle, a smaller clear plastic bottle, a white plastic cup, and a clear plastic can. The scene is dimly lit, with light rays filtering through the water.

# MARINE PLASTIC IN ASIA

- **90%** of the marine plastic enters the ocean through **10 rivers**. Eight of them are in Asia – the Yangtze; Indus; Yellow; Hai He; Ganges; Pearl; Amur and the Mekong (Schmidt et al., 2017)
- The top six countries responsible for marine waste, led by China, are in East Asia (Jambeck et al., 2015; Wang et al., 2019).
- Marine debris costs the economies of countries in the region **US\$10.8 billion** in 2015, of which the fishing and aquaculture industry lost **US\$1.47 billion** (McIlgorm et al., 2020).

# GENDER ROLES IN FISHING ACTIVITIES

- Fishing communities across southeast Asia tend to practice gender-based division of labor in fisheries.
- Men go fishing in the ocean/sea. Women do gleaning and part-time fishing (Kusakabe & Thongprasert, 2022).
- Men have exclusive access to high-value species whereas nearshore & shallow ecosystems are controlled by both women and men (Torell et al., 2021).
- Women contribute significantly in post-harvest, processing, and marketing (Williams, 2008; Weeratunge et al., 2010; Satapornvanit, 2018).





# GENDER ROLES IN FISHING FAMILIES

Gender based division of labor is also noted at the household level.

- Women are responsible for carework, including feeding the family, irrespective of the income men bring (Kusakabe & Thongprasert, 2022).
- Men are not considered primary caregivers in the household, irrespective of whether they are involved in fishing activities.
- Due to the social undervaluation of women's work at home and in fisheries, women are expected to shoulder most of the workload at the household level (Ocampo & Binondo, 2022).



# LONG TERM IMPLICATIONS OF GENDER ROLES

Access to resources: Membership of fisher organizations, access to insurance, loans and grants due to loss of fisheries resources are all aimed at men since women are considered as not-fishers even though they are affected by the loss in fisheries (Kusakabe & Thongprasert, 2022).

Access to leadership: Though women hold key responsibilities in marketing and processing, these roles are seen as support and hence, women lack the privilege of participating in community decision-making (Ocampo & Binondo, 2022).





# MARINE PLASTIC AND FISHERIES

Fishing communities incur three kinds of costs due to marine plastic:

- repair and replacement of fishing gear damaged by marine litter;
- reduction in harvest and income due to fishing gear and locations damaged by marine litter;
- welfare costs including health impacts of dirty environment, lack of nutrition, and so on;
- costs incurred due to loss of ecosystem services such as recreation and aesthetics (Butler et al. 2013; Arthur et al. 2014; Bilkovic 2014).

While there has been some estimation of the loss to fishing gear and loss of income, there is as yet no way to quantify the welfare costs and loss of ecosystem services.

# IMPACT OF MP ON LIVELIHOOD OF FISHERS

It is estimated that only 10 percent of marine plastic come from fisheries related activities, but fisheries itself and coastal communities are greatly affected by marine plastic debris (MacFadyen, 2009).

Men's income is reduced due to increase in marine plastic waste, especially near the shore.

Women's income from gleaning is also reduced since the shores have increase in plastic waste deposits.





# IMPACT OF MP ON WOMEN'S FISHING ACTIVITIES

Near-shore habitats including beaches, mangroves, estuaries and intertidal zones are used largely by women in fishing communities (Kleiber et al. 2014).

Marine plastic litter in such spaces harms seafood by causing disease, reduces catch and causes economic losses (Newman et al., 2015).

It has a greater impact on women's near-shore fishing in terms of loss of income, well-being, and health (UNEP, 2016).



# GENDERED IMPACT OF MP ON WOMEN AND MEN

- Men have faced decrease in fish catch and in income, which pressures women to increase their income and seek other forms of livelihood (Kusakabe & Prak, 2021).
- People working or living in habitats polluted by marine litter also face health problems, which in turn increase women's workload.
- Further, loss of men's income tends to increase violence against women within the household and in the community.



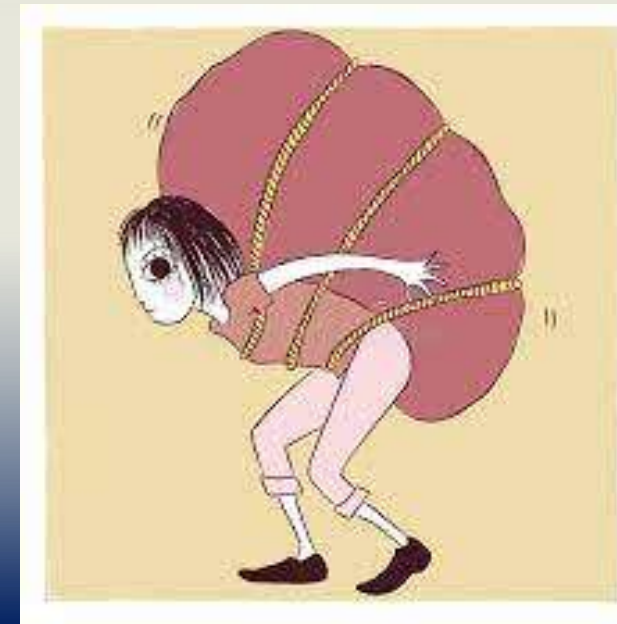


# INTENSIFIED IMPACT OF MP ON WOMEN

The impact of marine plastic on women in fishing communities is exacerbated due to gender roles and social norms:

- Responsibility for reproductive labor
- Responsibility for food security
- Responsibility for health of household members
- Increase in gender-based violence

Hence women's workload in both productive and reproductive work spheres increase.



## CONCLUSION

Although there is considerable research on plastic pollution, significant gaps remain that limit evidence-based decision making.

Inclusion of women from fishing communities in decision-making processes and inclusion of women's voices and concerns in decision-making.

Given the low status of women in fishing communities, their gendered knowledge is being lost and their contribution to fisheries, conservation and marine plastic mitigation is being lost due to the marginalization of women.



## CONCLUSION

It is critically important to ensure the involvement of affected women in marine plastic-related and fisheries-related policy making at the local, regional, national and international levels

Due to their physical location, social status and their economic status, women in fisheries are not directly involved in policy making and hence policies do not address their concerns.

There is a need to move policy-making from the capitals to the villages, from center to margin.

