

**Trawling for Balance:**  
Gender, Livelihoods, and Critically Endangered  
Elasmobranchs in Northern Java's Fisheries

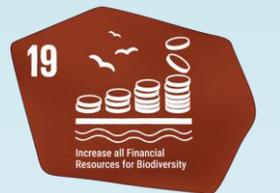
WIDYANINGSIH PENI LESTARI\*, FIKI HIDAYATI, AYI WARMIA, EFIN MUTTAQIN,  
LUKY ADRIANTO, HOLLIE BOOTH, GATOT YULIANTO, IRFAN YULIANTO

\*COASTAL AND MARINE RESOURCES MANAGEMENT - IPB UNIVERSITY, INDONESIA

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# The Global Paradox: **Policy vs. Practice**

- **The Commitment:** Kunming Montreal - Global Biodiversity Framework (KM - GBF) Targets 22/23 explicitly call for gender-responsive approaches.
- **The Reality:** Marine conservation remains largely gender-blind.
- **The Problem:** This invisibility perpetuates systemic inequalities and undermines effective biodiversity management.
- **Our Focus:** Small-scale (<10 GT) and Semi-industrial (>30 GT) fisheries, where women's crucial roles are systematically undervalued and undocumented.



# The Indonesian Context: **A Microcosm of the Challenge**

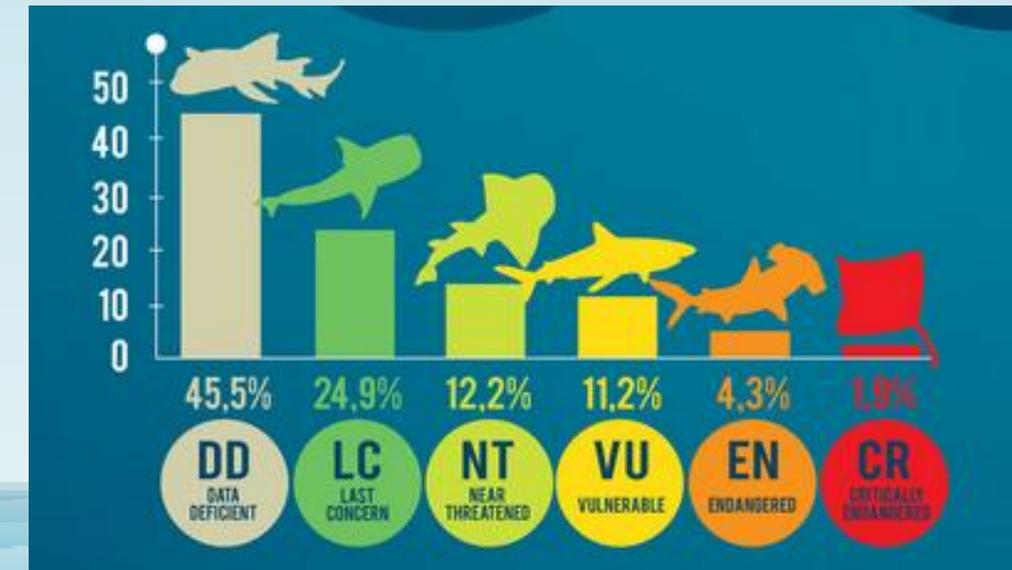
- World's largest archipelagic nation; fisheries are vital for food security & livelihood.
- One of the top global producers of sharks and rays, with rays making up for two-thirds of the exports.
- 90% of fishing vessels are small-scale.
- ~2.7 million capture fishers.
- Women comprise ~50% of the fisheries workforce, but much of their work is informal, unpaid, and unrecognized.
- Gender pay gap of 30-40% compared to men; women largely excluded from decision-making and governance.



# Our Case Study: Rembang, Central Java Province



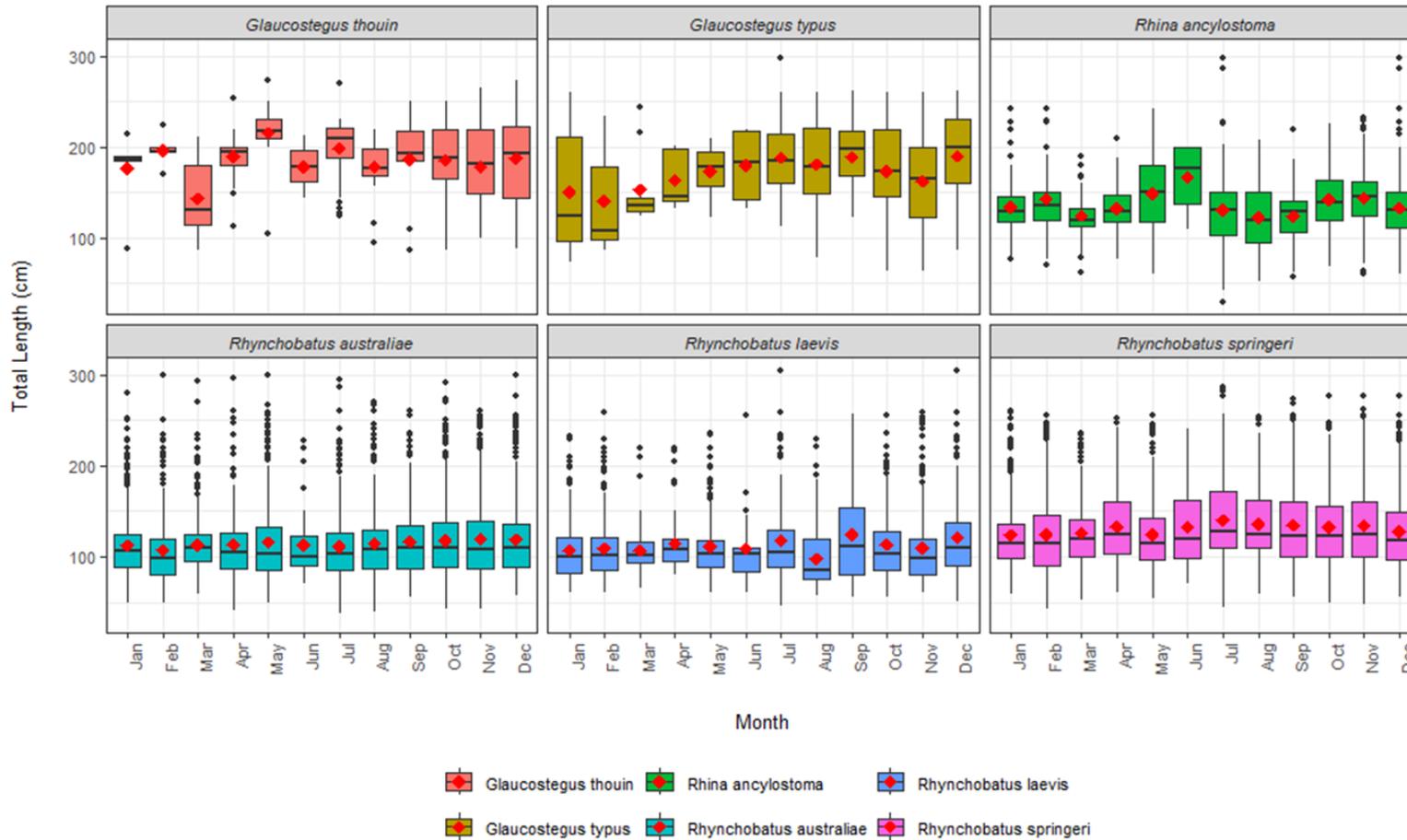
- High population density & poverty (~660,000 people, 14% below poverty line).
- ~ 227,000 capture fishers (second highest after East Java).
- ~ 422 boat seine vessels targeting pelagic species, but high bycatch of **Critically endangered** wedgefish & guitarfish (CITES Appendix II).
- On average >5,000 individuals are landed annually and >80% are below the recommended capture size.



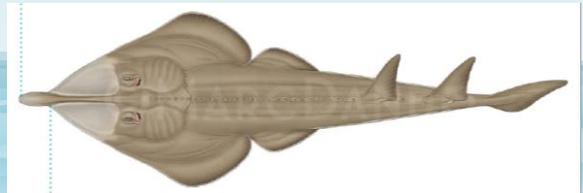
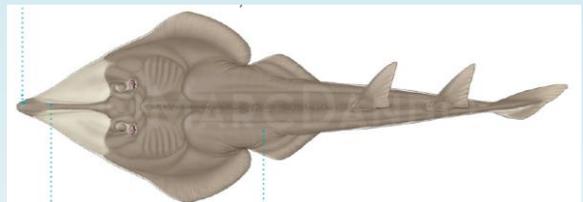
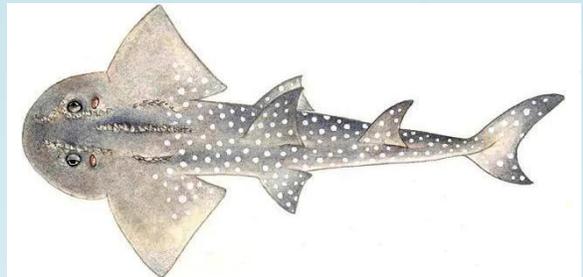


# Critically Endangered Bycatch

Average Total Length of Species by Month (April 2019 - Nov 2023, Oct 2024)



- Most of the individuals landed are juvenile.
- Bycatch decision-making: captains more “*conservation-minded*” vs. crew needing immediate income



# The Gendered Division of Labor

## AT SEA

(Men's Domain)

- **Captains:** Decision-makers on bycatch (release/retain). Motivated by regulations.
- **Crew:** Often rotational/mobile across vessel. Motivated by immediate income. Prefer to retain bycatch.

## ON SHORE

(Women's Domain)

- **Processors, Traders & Landing Workers:** Predominantly handling fish sorting. In some vessel, employed to record catch. Essential in post-harvest (smoke fish, process ray meat, create local dishes).
- **Role:** Ensure full utilization, provide affordable protein, sustain local food systems, yet remain largely invisible.



# Livelihoods & Markets

- Shark and ray fins exported.
- Some shark meat is sold locally (~US\$0.20/piece), provides affordable protein
- Meat processors in Rembang prefer smaller sharks & rays; larger ones are often sent outside Rembang.
- Meat processor's daily wage average ~US\$4.38 (~US\$0.60/hour). Working hours are from 1 PM – 8 PM daily.
- Fishers rarely consume shark and ray meat; market-driven incentives dominate



# Socioeconomic Survey Insights

## AT SEA

(Men's Domain)

- **Captains:**  
Support release of live bycatch.
- **Crew:**  
Agree to release <60 cm bycatch bycatch.

## ON SHORE

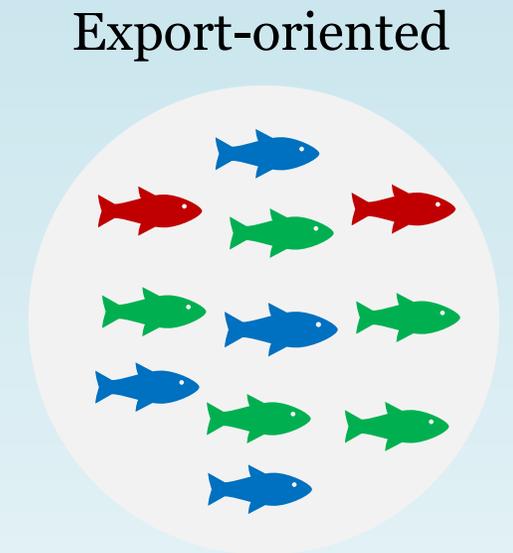
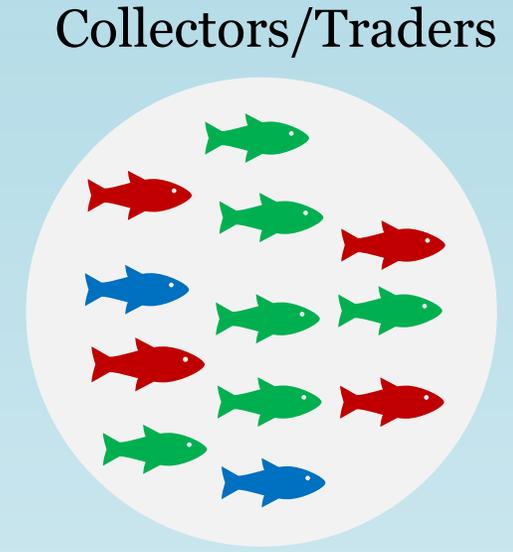
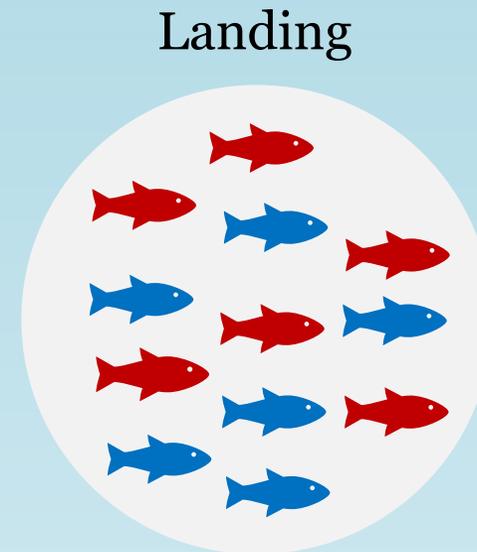
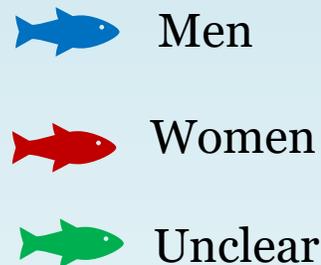
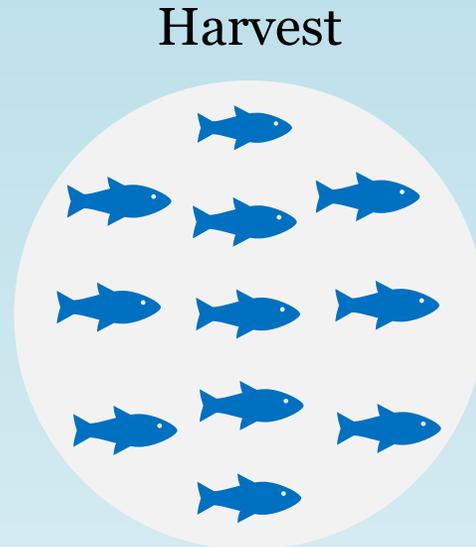
(Women's Domain)

- **Rembang processors,**  
Prefer smaller size of shark and ray “less bony”
- **Role:** Ensure full utilization, provide affordable protein, sustain local food systems, yet remain largely invisible.



# Gender Roles in Supply Chain

- **Harvest (Fishing Trips)**  
Dominated by men; women traditionally excluded (taboo).
- **Landing**  
Both men and women participate in unloading catch.
- **Collectors/Traders**  
Men and women both involved; proportions unclear.
- **Post-Harvest**  
Domestic market processing and sales → mostly women.  
Export-oriented products (e.g., fins) → likely dominated by men.
- **Access to Services**  
Fisher ID cards and insurance mostly issued to men.
- **Organizational Representation**  
Women often excluded from fisher groups.



Role: Producer, First Collector, Fin Collector, Processor/Distributor. Retailer, Exporter, Consumers)



# The Disconnect: Why Conservation is Failing

- **Lack of Incentives**

- Few financial compensation or other incentives are available for releasing bycatch (\*).
- Crew's economic precarity directly conflicts with conservation.
- Crowding effect for financial incentive

- **Weak Enforcement**

- Quota-based only for export
- Catch recommendation, but weak (no) enforcement.

- **Policy Blind Spot**

Management focuses solely on the capture sector (men), ignoring the post-harvest sector (women) that creates market demand.

\* An RCT project is currently underway to assess the effectiveness of a “pay-to-release” scheme, and the results are promising.

# Towards an Integrated, Gender-Responsive Framework



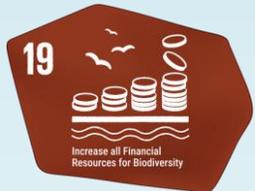
## Strengthen Conservation

- Enforce size limits
- Species-specific management plans



## Align Livelihoods with Conservation

- Bycatch release incentives
- Payments for ecosystem services



## Recognize Women's Agency

- Involve women in conservation awareness activities
- Gender-sensitive training for government agencies, civil organizations/NGOs



## Formalize Support & Policy

- Integrate gender roles into conservation and fisheries governance/policy
- Strengthen women's group and microenterprises



Conclusion:

## Linked Fates - A Path Forward for People and Elasmobranchs

- **Fates are Inextricably Linked**  
The survival of critically endangered elasmobranchs is directly tied to the economic security of fishers and the recognized value of women's work.
- **"Gender-Blind" Policy**  
Ignoring the gendered division of labor—from male crew decisions at sea to female-driven markets on land—undermines both conservation and community resilience.
- **A Dual Approach is Non-Negotiable**  
For Conservation: Enforce species-specific rules & create incentives for bycatch release.  
For Equity: Acknowledge women's roles through inclusive policy and involve them.
- We must trawl for balance—not just in the ecosystem, but in our social and economic systems too.



# Thank You



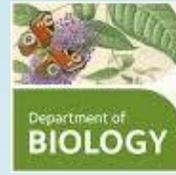
For further information, please contact:

W. Peni Lestari ([wplestari@apps.ipb.ac.id](mailto:wplestari@apps.ipb.ac.id))

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