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Gendered Vulnerability and Climate Resilience: Female Entrepreneurship along the Mekong River in Chiang Rai, Thailand

*Reni Juwitasari, Maya Dania
DRES-ARCID, School of Social Innovation, Mae Fah Luang University*

An aerial photograph showing a city with a river. The foreground and middle ground are heavily flooded with brown water, submerging many houses and streets. In the background, a large river flows through a densely populated urban area with many buildings and trees. The sky is not visible.

Background : Climate Change, Disaster, and the Mekong

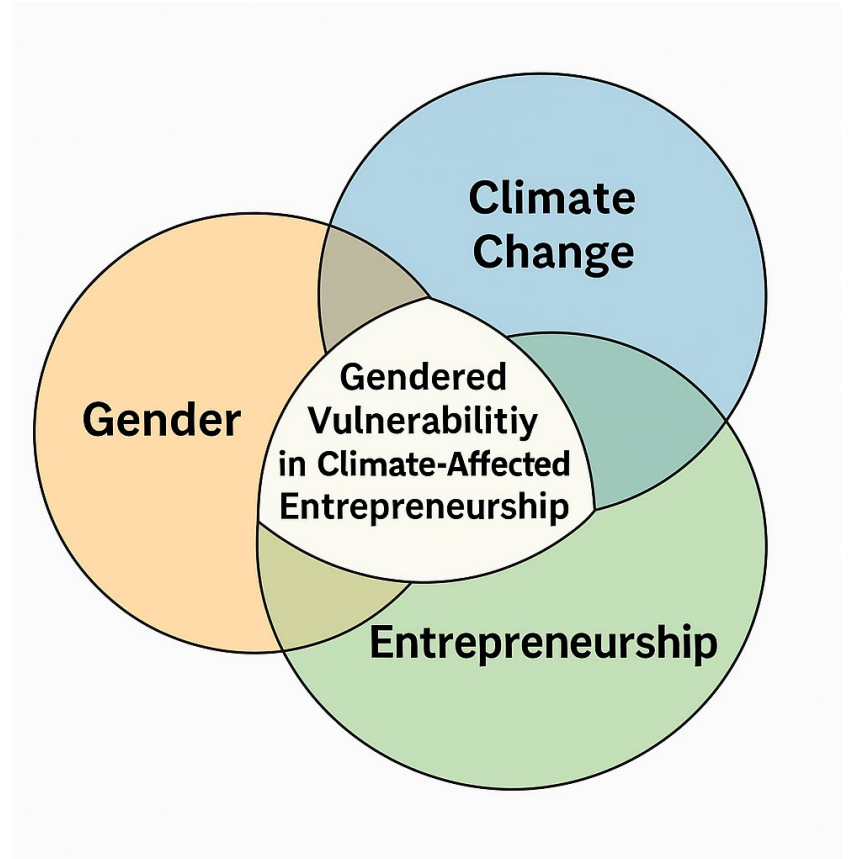
- The Mekong River is under pressure of climate change and human interventions
- Climate change has intensified extreme weather events: Typhoon Yagi, September 2024
- Impacts to the riverine women for their social-economic vulnerability

Problem Statement: Gendered Disaster Vulnerability

- **Climate change is not gender-neutral.**
- Women, especially those dependent on natural resources for their livelihoods, experience the consequences of environmental change more severely. However, existing disaster risk frameworks often overlook these differentiated vulnerabilities.

Thus, our aim was twofold:

- First, to analyze how the river women (locally called “Mae Ying”) are impacted by the convergence of climate-induced disasters, ecological degradation, and socio-economic marginalization.
- Second, to identify and understand the adaptive strategies they employ to sustain their livelihoods.



Theoretical Framework: Ecofeminism, Second Glass Ceiling, and SDGs

Ecofeminism reveals how the oppression of women and the exploitation of nature are deeply interconnected, often structured by the same patriarchal and capitalist systems.

In parallel, our research supports global commitments under the Sustainable Development Goals:

- **SDG 5:** Achieving gender equality and empowering all women and girls.
- **SDG 8:** Promoting inclusive and sustainable economic growth, and decent work.
- **SDG 13:** Taking urgent action to combat climate change and its impacts.



8 DECENT WORK AND
ECONOMIC GROWTH

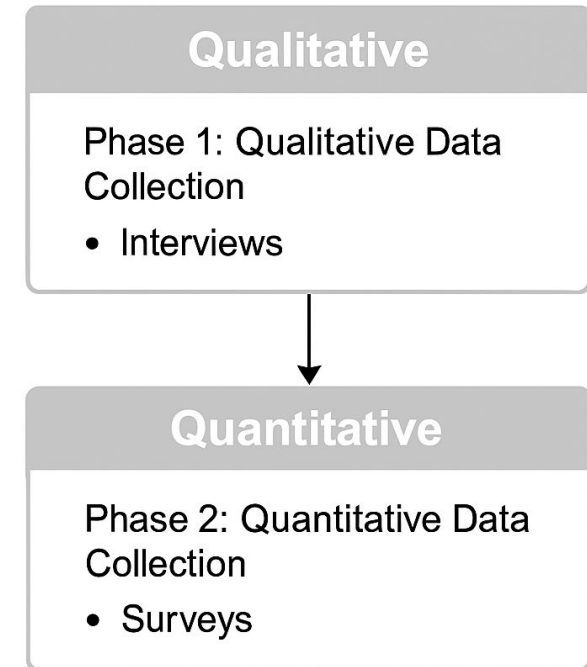


Methodology: Mixed-Methods Approach

We utilized a **mixed-method exploratory sequential design**.

- Phase 1 involved **qualitative data collection** through **in-depth semi-structured interviews** with ten female entrepreneurs.
These interviews allowed rich, narrative explorations of their lived experiences.
- Phase 2 was **quantitative**, using **structured surveys** administered to fifty women.
The survey gathered demographic data, entrepreneurial challenges, perceptions of environmental changes, and adaptive strategies.

Exploratory Sequential Design



Key Findings: Climate Impacts on River-based Livelihoods

Our findings reveal that climate change is disrupting the ecological base upon which Mae Ying livelihoods depend.

Specifically:

- The irregular flood-drought cycle reduces the local green algae (locally named as *Kai*) growth.
- Flash floods during unexpected periods destroy foraging grounds.
- Infrastructure damage impedes access to local and cross-border markets.

Cultural Heritage Under Threat

UNESCO (2019) notes that traditional ecological knowledge systems, such as Kai harvesting and processing, represent intangible cultural heritage vital for community identity and social cohesion.





Gendered Vulnerability : Structural Challenges

The Mae Ying women face what we conceptualize as the "**second glass ceiling.**"

This ceiling is compounded by:

- Gendered barriers: limited access to capital, markets, and leadership roles.
- Environmental vulnerability: ecological collapse, resource depletion, and climate uncertainty.

Adaptive Strategies: Resilience in Practice



Despite these compounded vulnerabilities, Mae Ying women are not passive victims. They have crafted innovative adaptive strategies, including:

- **Cross-border collaboration:** Building informal trade networks with women entrepreneurs across the Laos border, bypassing national market barriers.
- **Kai-based product innovation:** Developing therapeutic and nutritional products (such as Kai chips, supplements, and snacks) to tap into health-conscious markets.
- **Festival-driven market expansion:** Utilizing seasonal events to attract tourists, showcase products, and diversify customer bases.

These strategies show **agency, creativity, and resilience**

Policy Recommendations: Toward Gender-Responsive Resilience

Our study emphasizes the urgent need for **integrated, gender-responsive climate adaptation strategies**, specifically:

- Mainstream gender considerations into **disaster risk reduction and climate action** plans (**SDG 13**).
- Expand women's access to finance, education, and cross-border markets to achieve **economic empowerment** (**SDG 8**).
- Design ecological restoration programs that involve women as knowledge holders and leaders (**SDG 5**).

The lived experiences of Mae Ying women show that **resilience is both an ecological and feminist project**.





Conclusion: Resilience, Justice, and the Future

In conclusion, the story of Mae Ying women along the Mekong River reveals a powerful truth:

- Climate resilience cannot be achieved through technical fixes alone.
It requires **recognizing gendered vulnerabilities, valuing indigenous knowledge, and building solidarities across human and ecological communities.**
- By strengthening the resilience of riverine women entrepreneurs, we advance not just local livelihoods, but a broader vision of **justice and sustainability** for the Mekong region.

