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The U.S. Government's Global Hunger & Food Security Initiative

## Gender Analysis in Aquaculture Value Chain: A Case Study of Tilapia Cage Culture in Sakon Nakhon, Thailand



By

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# Researcher Team

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# Introduction

- In Thailand gender roles are getting more attention from both government and private sectors;
- Not many studies on how much women contribute to aquaculture development in Thailand;
- Tilapia is the most important cultured fish specie. In 2012, Thailand produced 153,311 tons of tilapia, 20% of which came from cage culture;



# Introduction (continued)

- Northeast of Thailand is the most populated and has the lowest per capita income;
- Tilapia cage farming is an important income and protein source for people in the Northeast;
- Sakon Nakhon province is one of the most important aquaculture areas in the region.



# Objectives

- To map the gender roles in small scale tilapia cage culture in Sakhon Nakhon;
- To identify and analyze roles and activities of women and men in the tilapia grow-out stage;
- To identify the gender issues, needs and opportunities.



# Methodology

- **Population**

- Tilapia cage farmers in Sakon Nakhon Province

- **Data collection**

- Secondary data

- Primary data

- Key informants interviews
- 30 tilapia cage farmers interviews
- In-depth interviews of 9 female cage farmers





# Methodology (continued)

- Data Analysis

- Descriptive and comparative analysis with quantitative & qualitative methods

- SWOT analysis



## Tilapia cage culture in Sakon Nakhon Province





# Tilapia Cage Farming



- Mostly operated in public water sources i.e. rivers reservoirs;
- Tilapia are stocked within a net bag tied to bamboo or galvanized iron pipes cage frames supported by buoys made of bamboo or PVC barrels or oil drums;
- Cage sizes are varied (ex. 3x3x2.5, 4x6x2.5, 2x4x2.5 m.).



# Tilapia Cage Farming

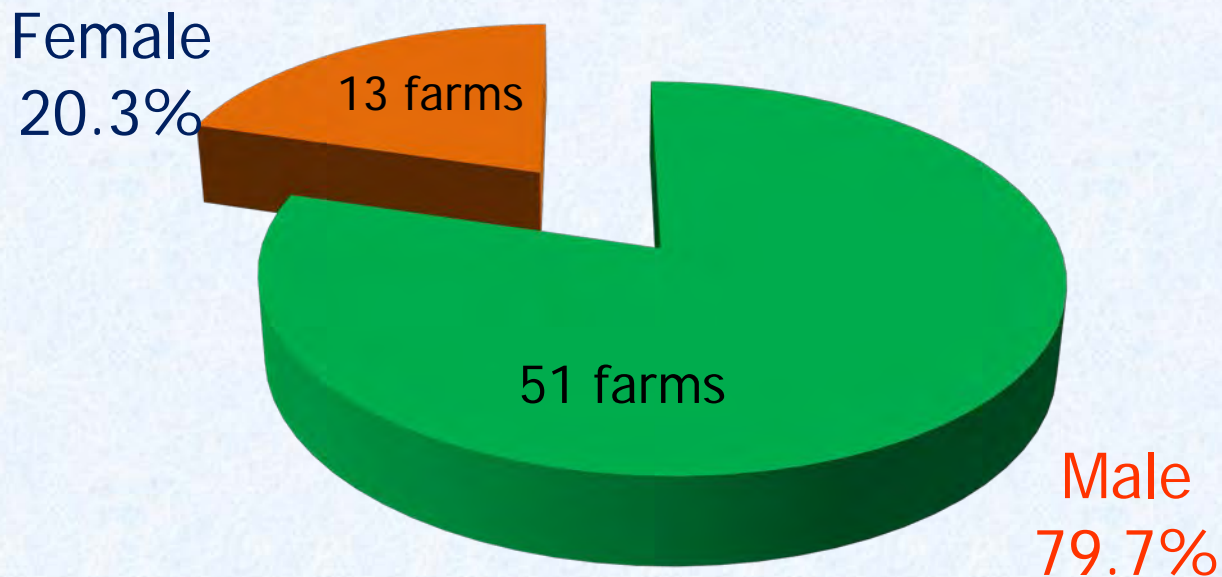
- Stocked with male Nile tilapia or red tilapia fingerling (*Oreochromis niloticus*) size 35 – 40 gm.;
- Raising period is 4 – 5 months;
- Usually feed with manufactured feed pellet (25 – 30 % protein content).;
- Harvested size 600 gm. or more;
- Selling price 60 – 70 baht /kg (1.8 – 2.2 US\$);
- Contacted farming are widely practiced.





# Tilapia Cage Farming

- 64 registered tilapia cage farmers in Sakon Nakhon Province in 2013;



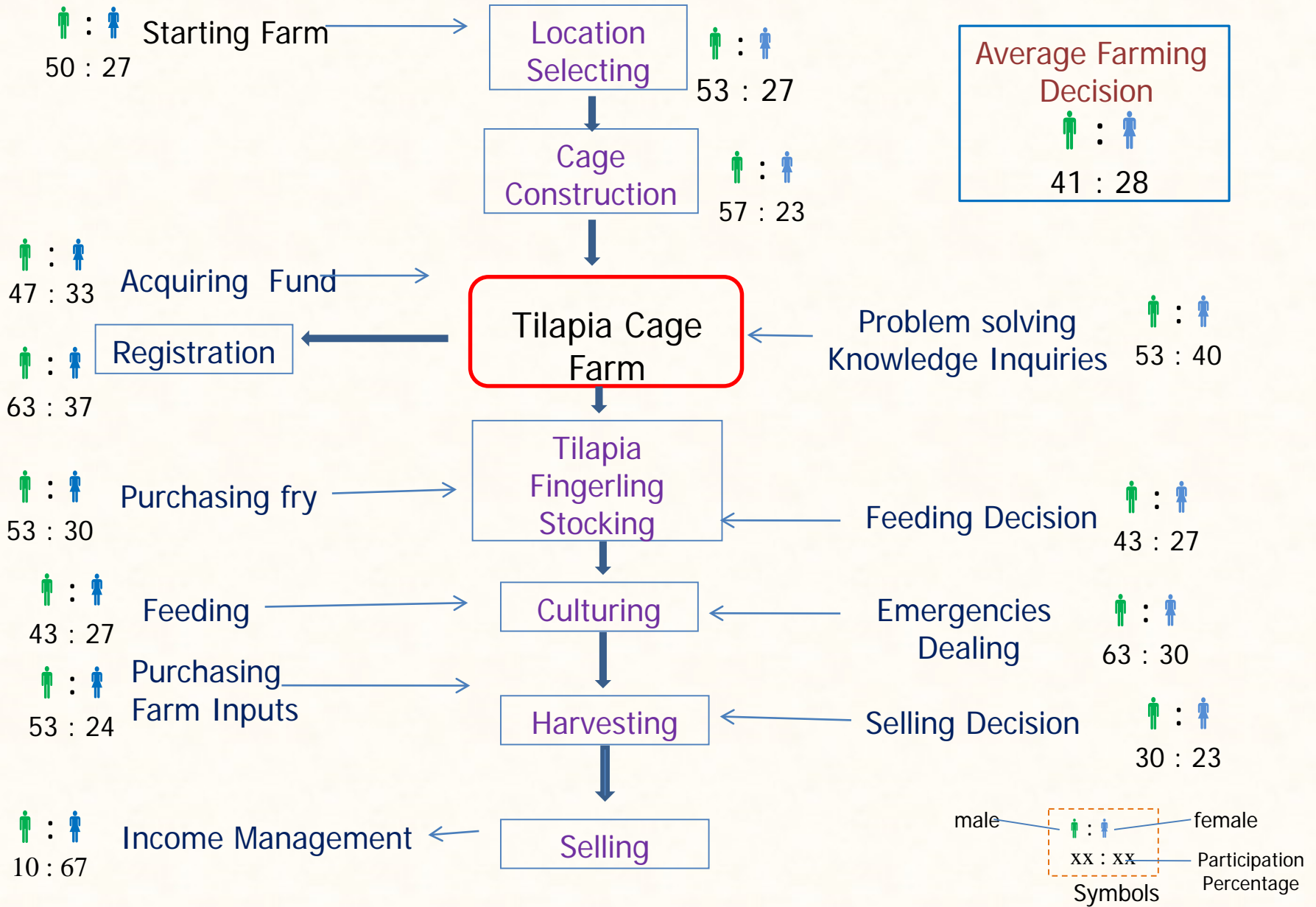
# Results

	Total	Male	Female
Respondents	30	63%	37%
Cages owned	11.5	13.53	8.27
Crop per year	2.04	2.0	2.09
Stocking Density (fish/m <sup>2</sup> )	33.62	29.99	39.84
Labours used (persons)	2.1	2.21	1.90
Annual Production (Kg)	10,225.0	10,900.0	8,763.64



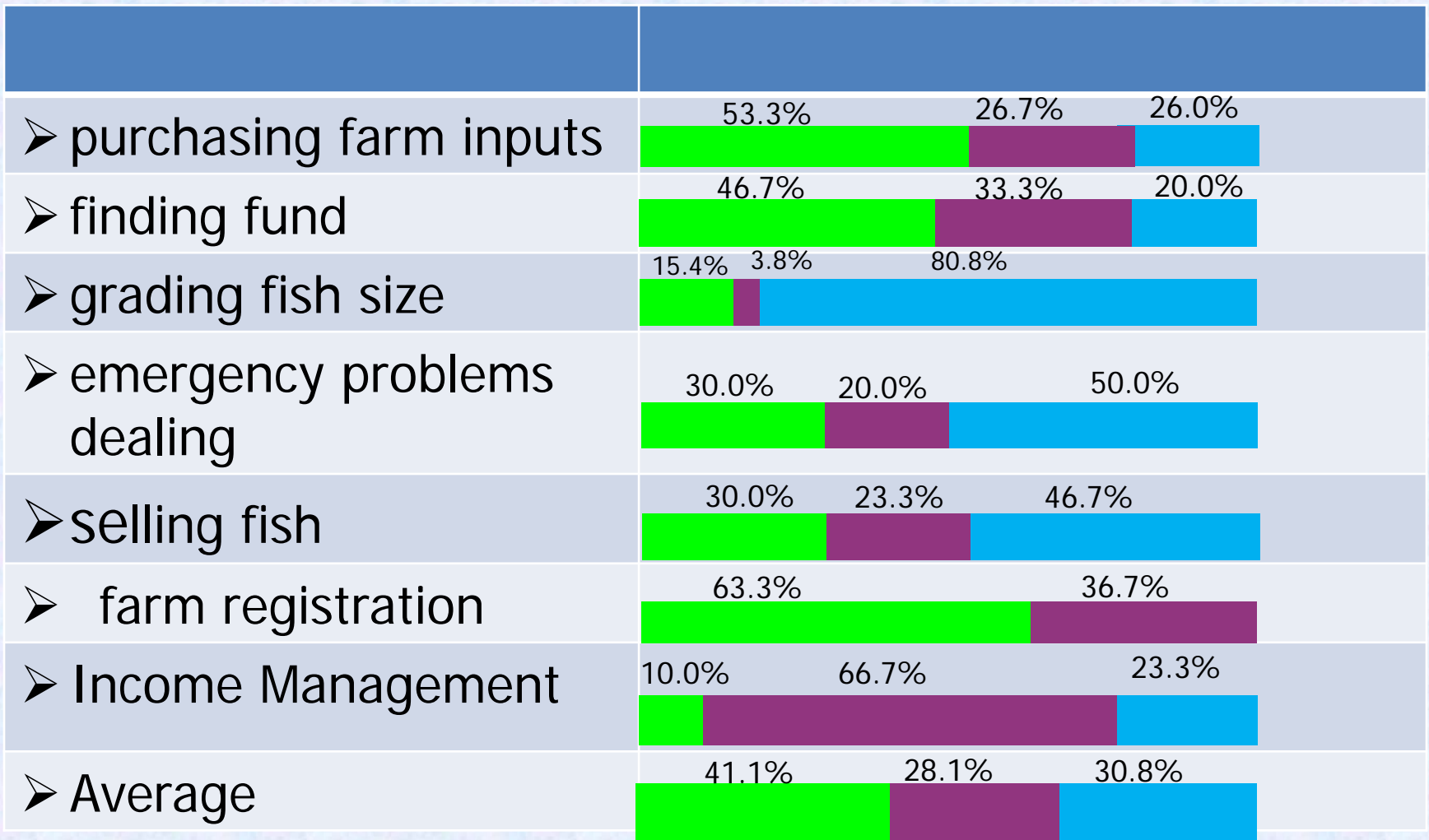
# Results

	Total	Male	Female
Selling Price (US\$)	1.95	1.94	1.95
Feed cost (US\$)	13,826.0	14,945.6	11,593.4
Total cost (US\$)	17,152.6	18,911.2	13,731.4
Cost per kg. (US\$)	1.74	1.54	1.86
Profit per kg. (US\$)	0.21	0.08	0.41





Decision Matter	Male	Female	Both
➤ Starting the farm	50.0%	26.7%	23.3%
➤ Choosing farm location	53.3%	26.7%	20.0%
➤ acquiring knowledge to solve farming problems	53.3%	40.0%	6.7%
➤ cage construction	56.7%	23.3%	20.0%
➤ purchasing fingerlings	53.3%	30.0%	16.7%
➤ feeding Decision	43.3%	26.7%	30.0%
➤ fish feeding	16.7%	10.0%	73.3%
Average			

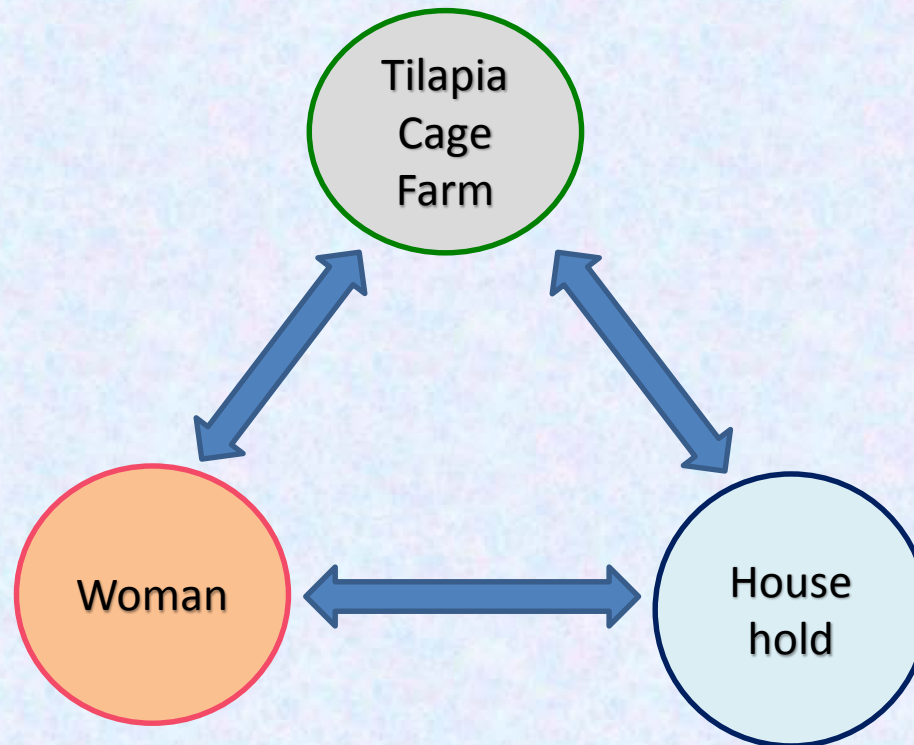


# Conclusion

- Tilapia cage farming in Sakon Nakhon was involved by different gender roles;
- In general, male cage farmers played more roles in tilapia cage farming than female cage farmers;
- There were no rules or regulations preventing female cage farmers from participating in tilapia cage farming. Their roles in the tilapia cage farms were limited by their responsibilities in the households.



# Conclusion



Small scale tilapia cage farming equilibrium

# Implication

- Provide training concerning tilapia cage farming specifically to female tilapia cage farmers;
- Tilapia cage farming extension efforts should focus more on the women;





# Implication (continued)

- Encourage cage farmers to process their tilapia production into other value added fish products to lessen their dependence on selling their fresh fish through middle persons or feed agents and allow female to participate more.
- Create more stable and reasonable selling price for fresh tilapia production and increase cost for feed and tilapia fingerlings to reduce risks and create more favourable situation for female farmers to participate more.



*Thank you*



**Krob Khun Krub**