



Assessment GESI in Aquaculture sector in Thailand

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GESI Showcase

A women lead Shrimp Farm and exemplifies sustainable, family-driven shrimp farming

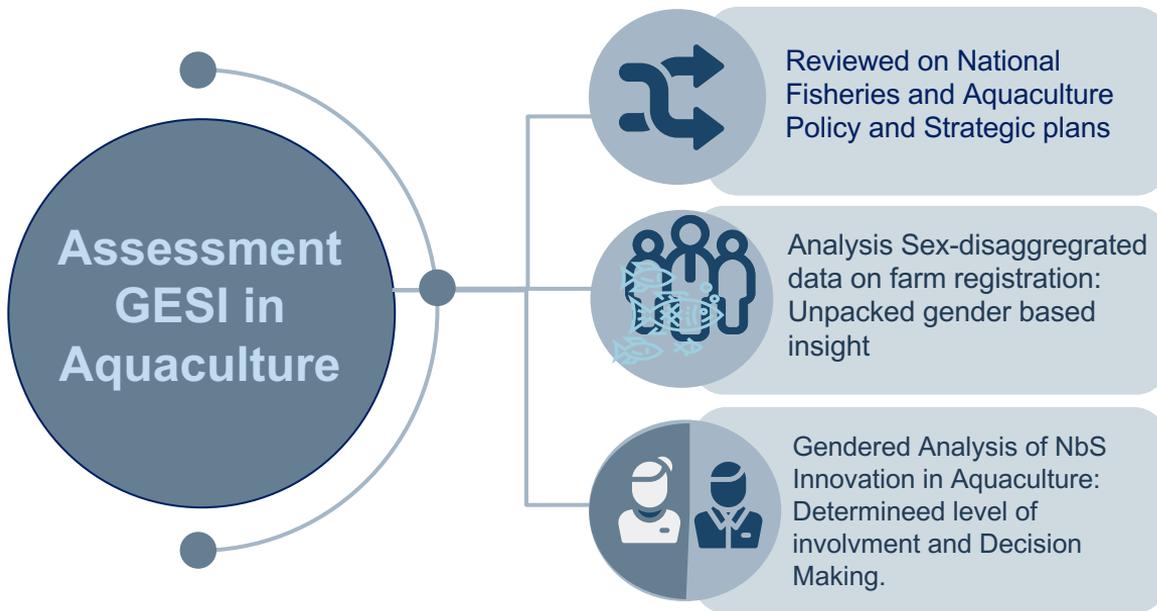
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Methodology





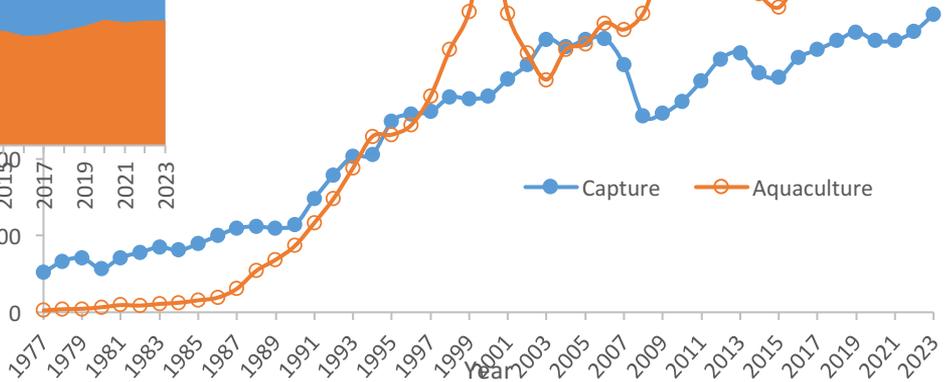
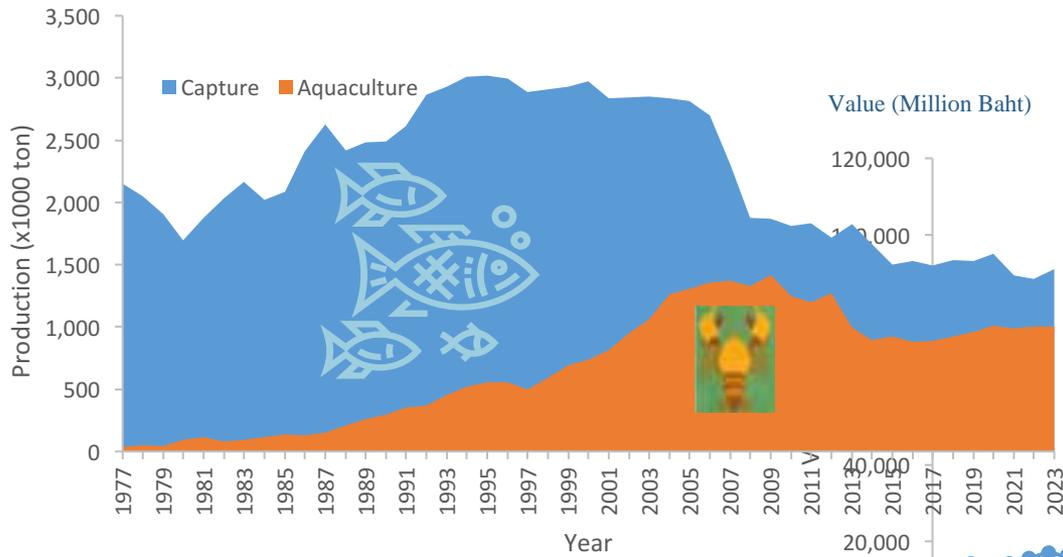
Introduce Aquaculture Sector

- Thailand has big area of various natural water of Marine, Brackish and Inland water generate high diversity of aquatic animal and production. As good ecosystem, aquatic animals play a crucial role in the lifestyle and culture of the Thais.
- Aquaculture in the late 16th century was an ornamental fish were first introduced. Till the mid 19th century, farming of striped catfish for consumption began and later **tilapia farming** gained popularity after 1965.
- The fast growth of the sector is around 1980s, when marine catch started to decline and foster the growth of aquaculture due to the successes of shrimp and freshwater fish farming





National Fisheries Statistics





Pictures help reinforces the concept

Photos reflects the sector's transformation from capture fisheries to aquaculture, while also illustrating the evolving roles and shared responsibilities of men and women.





Thailand's Fisheries and Aquaculture Policy

Reform & Sustainability

Introduce sustainability principles for production efficiency and farm standard

Consolidate & Controversy

Balance economic growth with ecological and social sustainability



1985 -
2000

Growth of Aquaculture

Rapid growth of commercial aquaculture to boost export

CGEO

2000 -
2015

2015

A turn point

Royal Ordinance on Fisheries B.E. 2528

2015 -
2525





GESI in Thailand's Aquaculture Sector

Growth of Aquaculture



Policy Focus

- Production/Industrial expansion,
- Export-driven aquaculture (especially shrimp), and resource extraction.



GESI Status

- Gender roles were invisible
- Women's contributions in post-harvest processing and small-scale aquaculture were undervalued.
- Ethnic minorities and marginalized communities had limited access to formal fisheries systems.



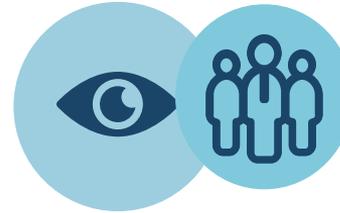
GESI in Thailand's Aquaculture Sector

Raising Awareness



Policy Focus

- Sustainability and community-based fisheries gained traction,
- Acting on International pressure on IUU (2011) and prompted governance reforms.



GESI Status

- Gender and development issues began to surface and still limit access to fisheries system
- Women's participation in cooperatives and local committees increased, but decision-making power remained limited.
- Infrastructure gaps disproportionately affected women's economic and mobility



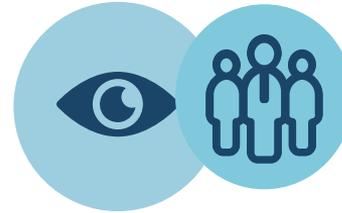
GESI in Thailand's Aquaculture Sector

Royal Ordinance & Institutionalizing Equity



Policy Focus

- The Royal Ordinance on Fisheries B.E. 2558 (2015) introduced structural reform



GESI Status

- Policies began recognizing women, youth, and ethnic minorities as key stakeholders.
- Capacity-building programs targeted women's access to training, resources, and leadership roles.
- Proposed legislative rollbacks in 2024 raised concerns about weakening labor protections and others.

GESI in Aquaculture improvement measures



Period	GESI recontion	Women's participation	Policy support	Key Barrier
1985 - 2000	 Minimal	Informal, undervalued	Absent	Culture norm, invisibility
2000- 2015	 Emerging	Growing in group and cooperatives	Limited started data monitoring	Infrastructure, training gaps
2015 - 2025	 Institutionalized	Reported est.45 % in aquaculture	Strengthen	Access to innovation, Decision-making power
2025 -		est.49 %	Continue strengthen	

Momentum of development in aquaculture sector in Thailand had made significantly stride integrating GESI in aquaculture development



GESI Meeting in the DOF

- ❑ Meeting for developing Strategic Action Plan the for year 2023 - 2027 to ensure GESI is integrated in the DOF development projects and programmes and mornitoring the progress.
- ❑ Leded by the Chief Gender Executive Officer (CGEO)



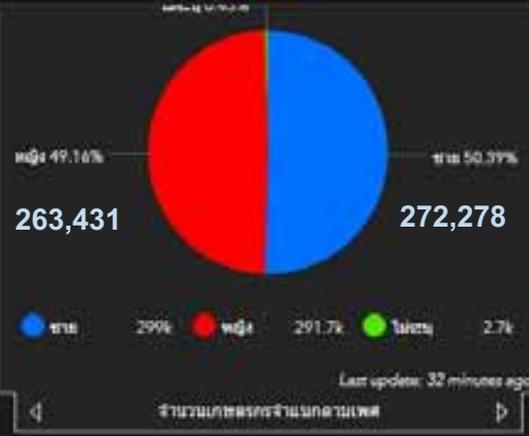
LINK : แผนที่แสดงที่ตั้งฟาร์มผู้เพาะเลี้ยงสัตว์น้ำ (fisheries.go.th) DOF ArcGIS of LBIS ●

Farm Registration
จำนวนฟาร์ม 593,444

Last update: 32 minutes ago

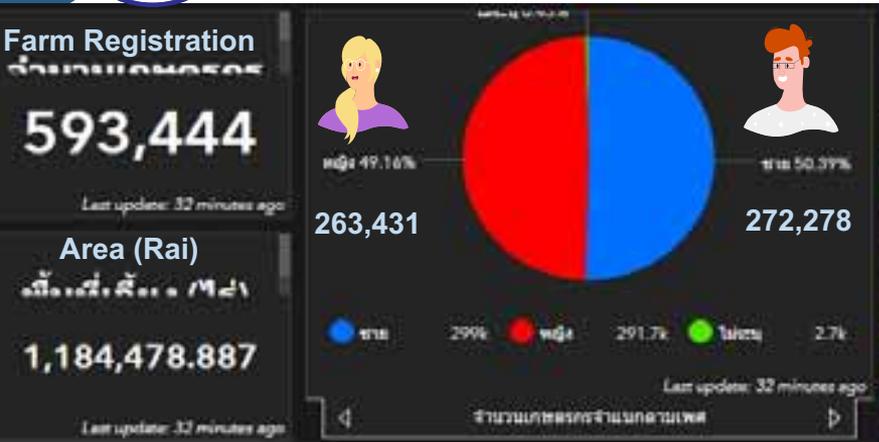
Area (Rai)
เนื้อที่รวม 1,184,478.887

Last update: 32 minutes ago





DOF Aquaculture Farm Registration



- ❑ Farm registration is a voluntary system designed as sex-disaggregated data to help the DOF to monitor aquaculture sector and provide benefits to farm operators.
- ❑ Registration is free and valid for 3 years and fish farmers are required to commit to updating their farm cultivation data annually .
- ❑ **Registration allows only the Thais.**
- ❑ **Farm registration systems often fail to reflect the reality on the ground, where the registered owner may differ from the actual operator—creating barriers to support and succession planning**



Aquaculture Sector Information

Status

Summary report of all provinces annually



Involvement

Number active Farm operators

Production

Farm practice, area and estimated production



GESI

Sex-disaggregated data of registration aquaculture farm





Sex Disaggregated Data 2025

Reg. farm by Gender

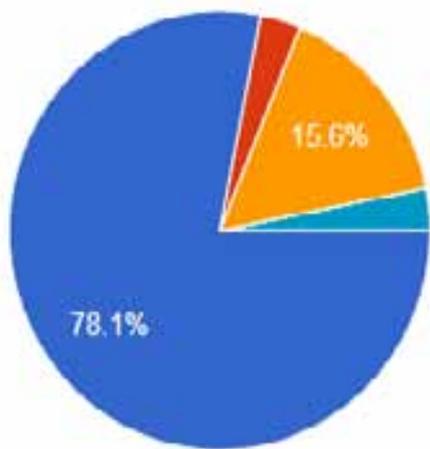


Age group is not available





GESI and NbS in Aquaculture

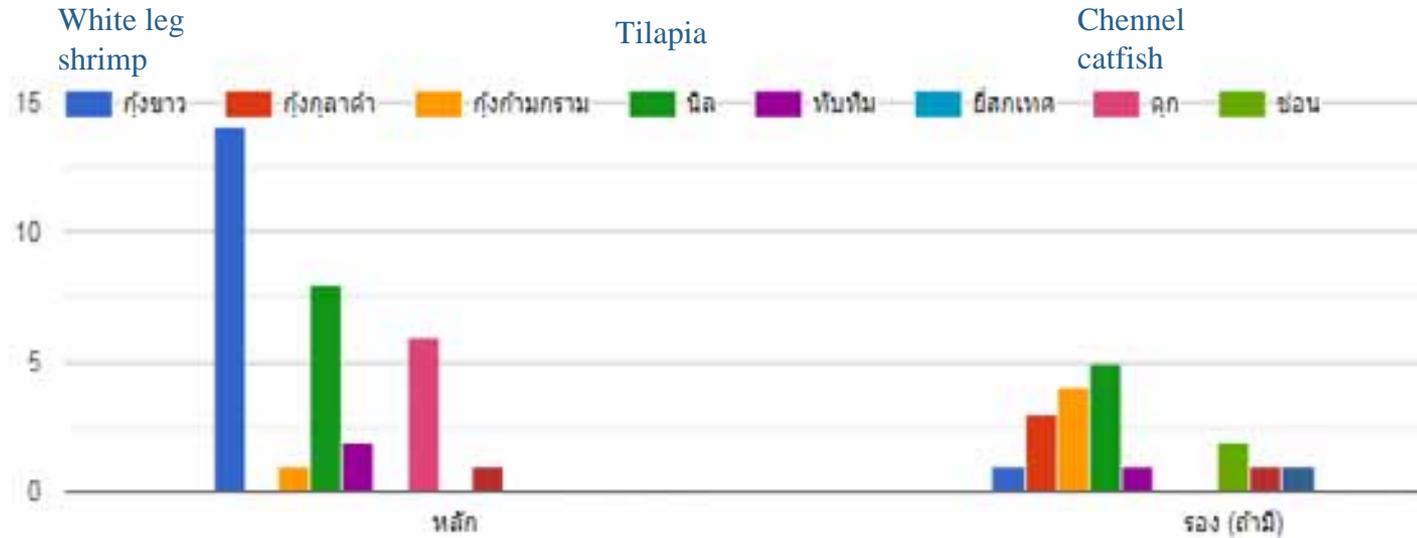


- บ่อดิน
- บ่อซีเมนต์
- กระชัง ในแหล่งน้ำเปิด
- นาข้าว/นาบัว
- ร่องสวน
- กระชัง ในบ่อดิน
- บ่อพลาสติก
- อื่นๆ

- ❑ Major group of respondents conducts pond culture.
- ❑ Major species culture are Marine shrimp and Tilapia is mainly for cage culture.
- ❑ One intensively culture in Cement Tank is for Marine Shrimp.



GESI and NbS in Aquaculture



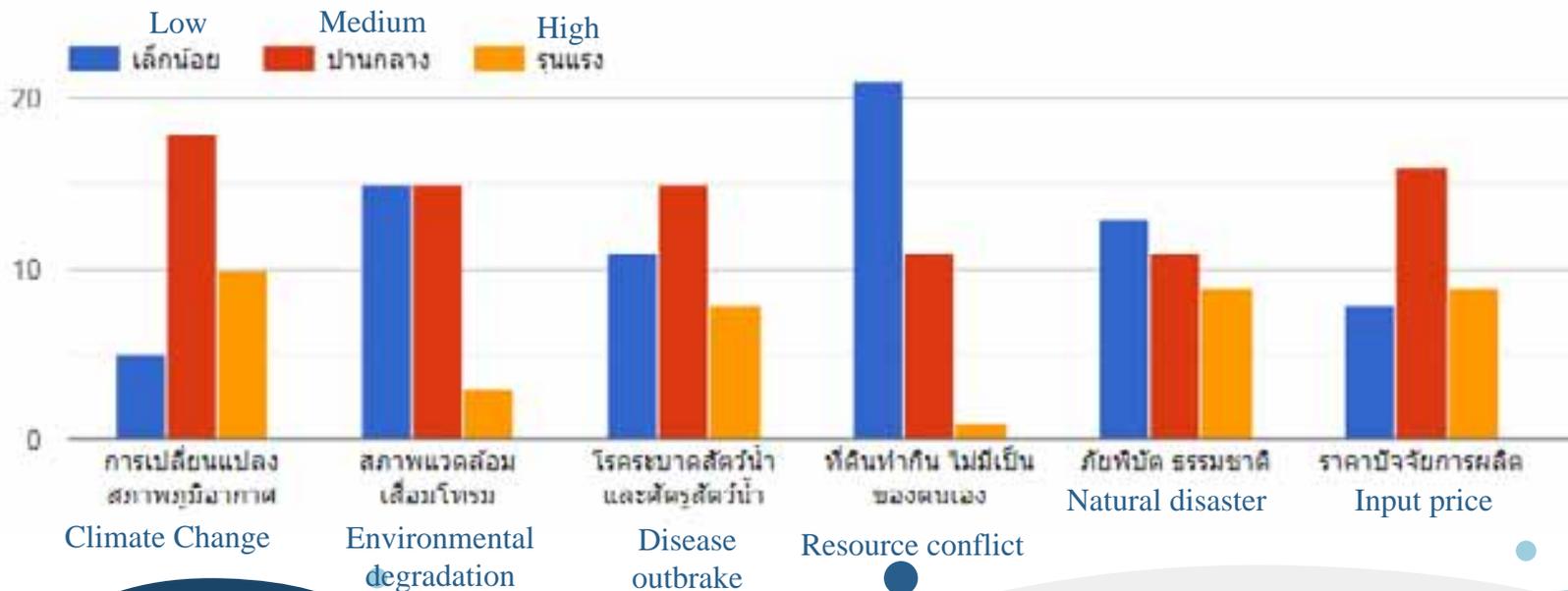
Major species culture of farm operates were White Shrimp, Tilapia and Chennel catfish.



GESI and NbS in Aquaculture

ท่านพบ/มีปัญหา การเพาะเลี้ยงสัตว์น้ำจากข้อใดบ้างต่อไปนี้ และระดับความรุนแรงของปัญหา

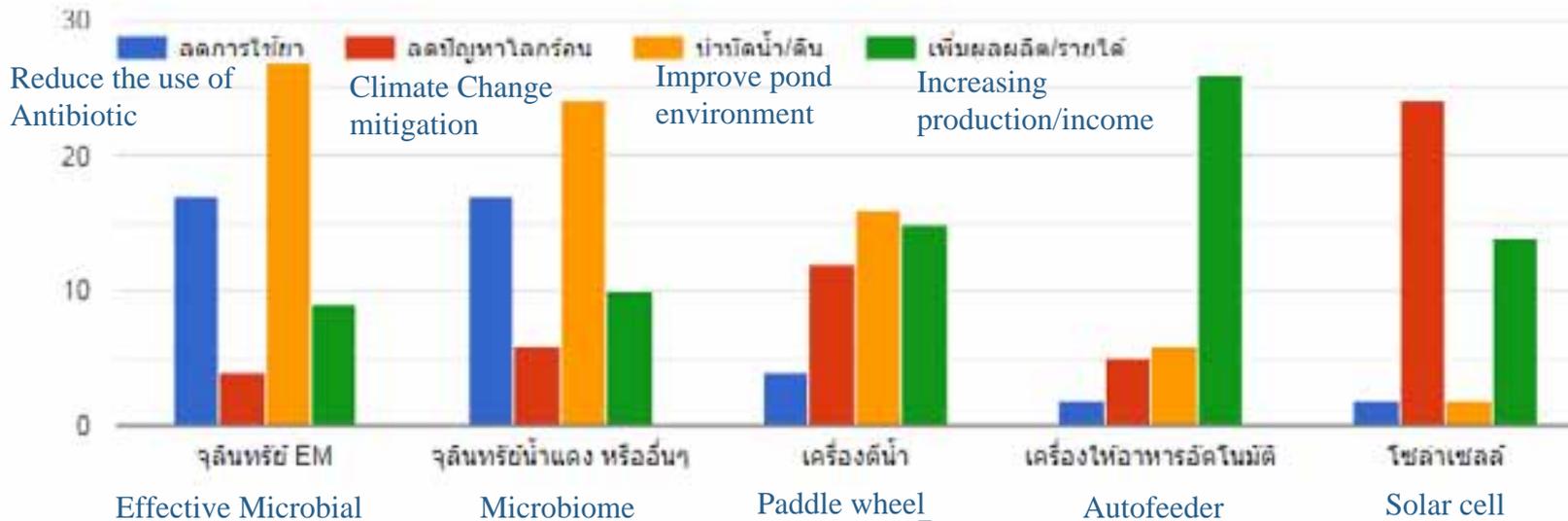
Problem faced in cultivation and the level of problem





GESI and NbS in Aquaculture

In your view, how can innovations introduced at farm help support key criteria in aquaculture?

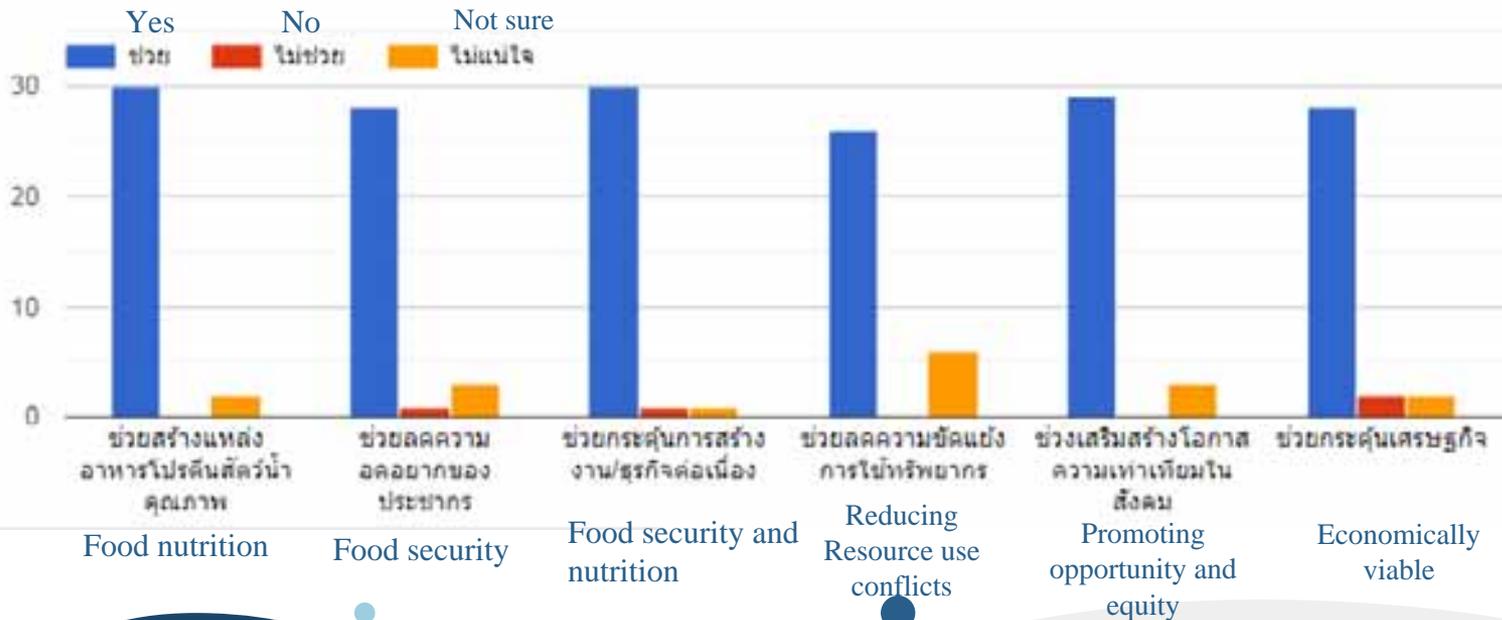




GESI and NbS in Aquaculture

ท่านคิดว่า การเพาะเลี้ยงสัตว์น้ำ ที่ให้ความสำคัญต่อแนวทางธรรมชาติ (Nature-based Solutions) ส่งผลระดับใดตามหัวข้อ ต่อไปนี้

For your opinion, does the Nature Base Solition in aquaculture address each of this categories?





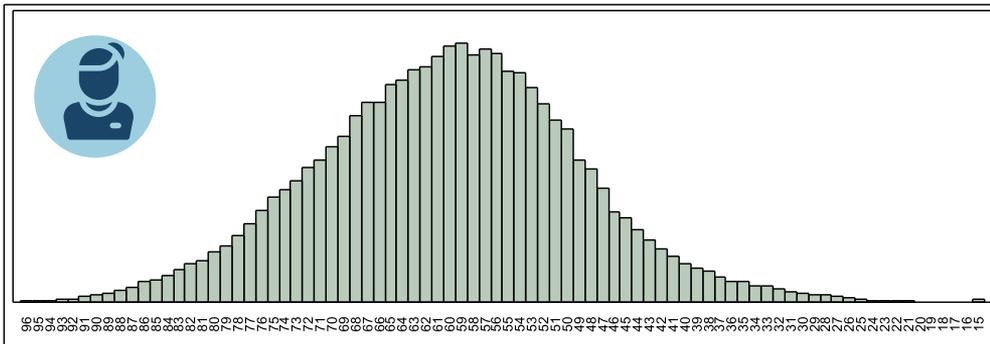
GESI and NbS in Aquaculture

- Both **women and men** actively participate in decision-making to introduce innovations that meet their needs—enhancing the cultivation process, improving pond environment condition, reducing costs, and boosting production.
- Technology transfer is no longer limited to men—women are now equally skilled in adopting new technologies and sharing their expertise with others.
- The empowerment of women has significantly advanced over the past two decades.

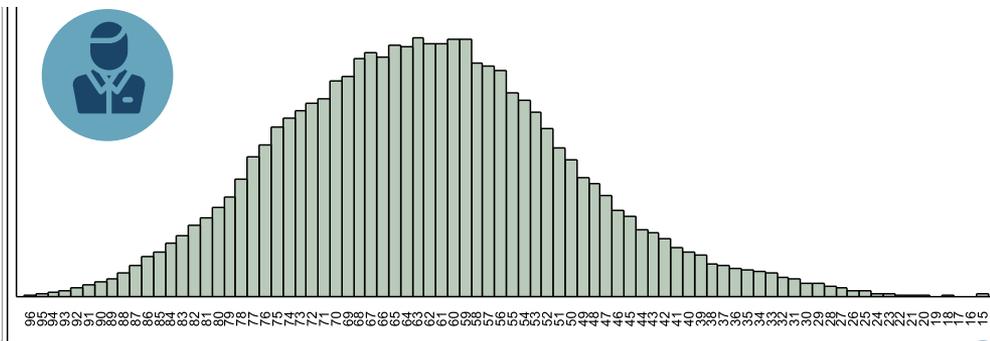
Innovation [จุลินทรีย์ EM]			
Level involvement to introduce Innovation	Female	Male	Grand Total
Making Decision	5	5	10
Making Decision, Transferred tech. knowledge	1	1	2
Making Decision, User, transferred tech. knowledge	5	4	9
Transferred tech. knowledge	3	3	6
User, transferred tech. knowledge	1	3	4
Total	15	16	31
% Total Respondents	47.8	50.0	98
Innovation Solar Cell			
Level involvement to introduce Innovation	Female	Male	Grand Total
Making Decision	4	3	7
Making Decision, Transferred tech. knowledge	1	1	2
Making Decision, User, transferred tech. knowledge	5	3	8
Transferred tech. knowledge	2	2	4
User, transferred tech. knowledge	1	2	3
Total	13	11	24
% Total Respondents	40.6	34.4	75
Innovation Natural Food			
Level involvement to introduce Innovation	Female	Male	Grand Total
Making Decision	2	3	5
Making Decision, Transferred tech. knowledge			
Making Decision, User, transferred tech. knowledge	2	3	5
Transferred tech. knowledge	2	1	3
User, transferred tech. knowledge			
Total	6	7	13
% Total Respondents	18.8	21.8	40.6



Distribution of Age by Gender



Gender	N Rows	Mean (Age)	Std Dev (Age)	% of Total(Age)	Quantile s 25 (Age)
Female	190,533	60.1	11.1	48.58%	53
Male	194,716	62.2	12.2	51.42%	55



- ❑ The majority of farm owners, both male and female, are of advanced age.
- ❑ **Could Lead to the issue on** demographic trend poses significant challenges in ensuring the smooth transfer of farm to younger generations.
- ❑ The registered owner may not be the individual actively managing or operating the farm.



A Legacy of Shrimp Farming

- **Sommaai Farm**, located in Surat Thani Province, Southern Thailand, specializes in white shrimp cultivation. The farm proudly avoids antibiotics, instead applying Effective Microorganisms (EM) throughout all stages of shrimp culture.
- The journey began when **Mrs. Pheaw** married **Mr. Sommaai**, who had been involved in the family's seafood trading business since 1990. Together, they ventured into shrimp farming. After several crop losses due to disease, operations were paused—until Mrs. Pheaw led the family back into farming.
- Drawing from past lessons, she introduced EM practices across the entire cultivation process. This shift led to successful production, though the family remained concerned about passing the business to the next generation.





A Legacy of Shrimp Farming

- Encouraged by his parents, **Mr. Thanawith**, their son, expressed interest. He was entrusted with managing cultivates **Vannamei shrimp** one pond independently, demonstrating patience and dedication following his parents' methods while actively seeking new knowledge and innovations. However, final decisions on new techniques remain under parental guidance.
- He consistently accompanies his mother to trainings and farmer group meetings—not only to support her, but also to deepen his own experience and understanding of shrimp farming.
- **A key mentor in his journey** is his mother, who patiently shares her expertise in EM application and technical know-how, ensuring her son builds the skills needed for long-term success.
- **In summary**, the KeanKhow family exemplifies sustainable, nature-based shrimp farming, This highlights intergenerational knowledge sharing, innovation, and a deep commitment to environmentally conscious aquaculture —laying the foundation for a thriving future.





Conclusion

This Assessment on GESI in Aquaculture in Thailand:

1. Thailand's aquaculture sector is governed by policies under the Department of Fisheries, which continue focusing on boosting production, promoting economic growth, and ensuring sustainability. However, over the past two decades, these policies have gained momentum in recognizing Gender Equality and Social Inclusion (GESI), alongside efforts to keep increasing production both quantity and quality to meet standards both national and international market demands. The current national policy also reflects the requirement to promote Nature base solution in aquaculture sector to ensure sustainability together with a growing commitment to mainstreaming GESI, particularly through initiatives aimed at empowering women, youth and marginalize group via capacity-building programs.

To further advance aquaculture development, the Nature Base Solution and GESI must be together fully integrated into the sector. This requires the establishment of clearer mandates and the implementation of actionable frameworks that ensure inclusive participation and equitable benefits for all.



Conclusion(cont.)

This Assessment on GESI in Aquaculture in Thailand:

2. The integration of sex-disaggregated data into Thailand's aquaculture farm registration system is progressing steadily, offering a more comprehensive view of male and female participation in the sector. The shift to present farm registration system online has further improved user accessibility. However, the available data from farm registration lacks clarity in verifying gender-related information, which may affect the accuracy of gender monitoring efforts. Therefore, summarized data still falls short of accurately capturing the depth and nature of involvement across different gender and social groups in aquaculture activities. This unclear could possibly mis-lead monitoring the gender equality in the sector.

To improve the quality of sex-disaggregated data in aquaculture, it is essential to refine the farm registration process through accurate data collection and validation. This includes strengthening the capacity of personnel to gather gender-sensitive information—such as age, roles and responsibilities, and capacity-building needs. In situations where time and human resources are limited, responsible agencies may consider implementing a farmer self-validation system to support timely and inclusive data updates.



Conclusion(cont.)

This Assessment on GESI in Aquaculture in Thailand:

3. The result from survey on Nature base solution in aquaculture are as summary;
 - Total 32 respondents of Marine shrimp, Tilapia and other freshwater fish farming are mainly pond culture practice (78.1 %), follow by cage culturist (15.6 %).
 - Farmers have identified several pressing challenges in the aquaculture sector, including climate change, environmental degradation, disease outbreaks, and rising input costs. In contrast, conflicts over resource use appear to be relatively minor and less severe.
 - Farmers have shared feedback on various nature-based solution innovations that support key criteria in aquaculture. Technologies such as effective microbes and microbiome help enhance pond environments and reduce reliance on antibiotics. Solar cell systems contribute to climate change mitigation and increasing income from reduction electric cost. Meanwhile, paddle wheels and automatic feeders have proven effective in boosting production efficiency. These innovation, both **women and men** actively participate in decision-making to introduce innovations that meet their needs.



Conclusion(cont.)

This Assessment on GESI in Aquaculture in Thailand:

3. The result from survey on Nature base solution in aquaculture are as summary;
 - In consideration to level of involvement, it clearly indicate the rise of women's involvement in aquaculture has significantly increased across all levels—from decision-making and innovation adoption to serving as users and sharing technical expertise with others. This growing engagement clearly reflects the advancement of women's empowerment over the past two decades, marking substantial progress toward gender equity within the sector.
 - **In summary**, this survey on nature-based solution innovations in aquaculture was conducted within a limited timeframe using an online questionnaire, which posed challenges in reaching and engaging farmers for responses. To gain a more comprehensive understanding of stakeholder involvement and the benefits of implementing nature-based solutions—particularly from a gender perspective—further comprehensive studies are recommended



Thank You

And it's now the time for any questions or thoughts you'd like to share.

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