



National Aquaculture Certification Schemes in Asia: Towards Sustainable Intensification

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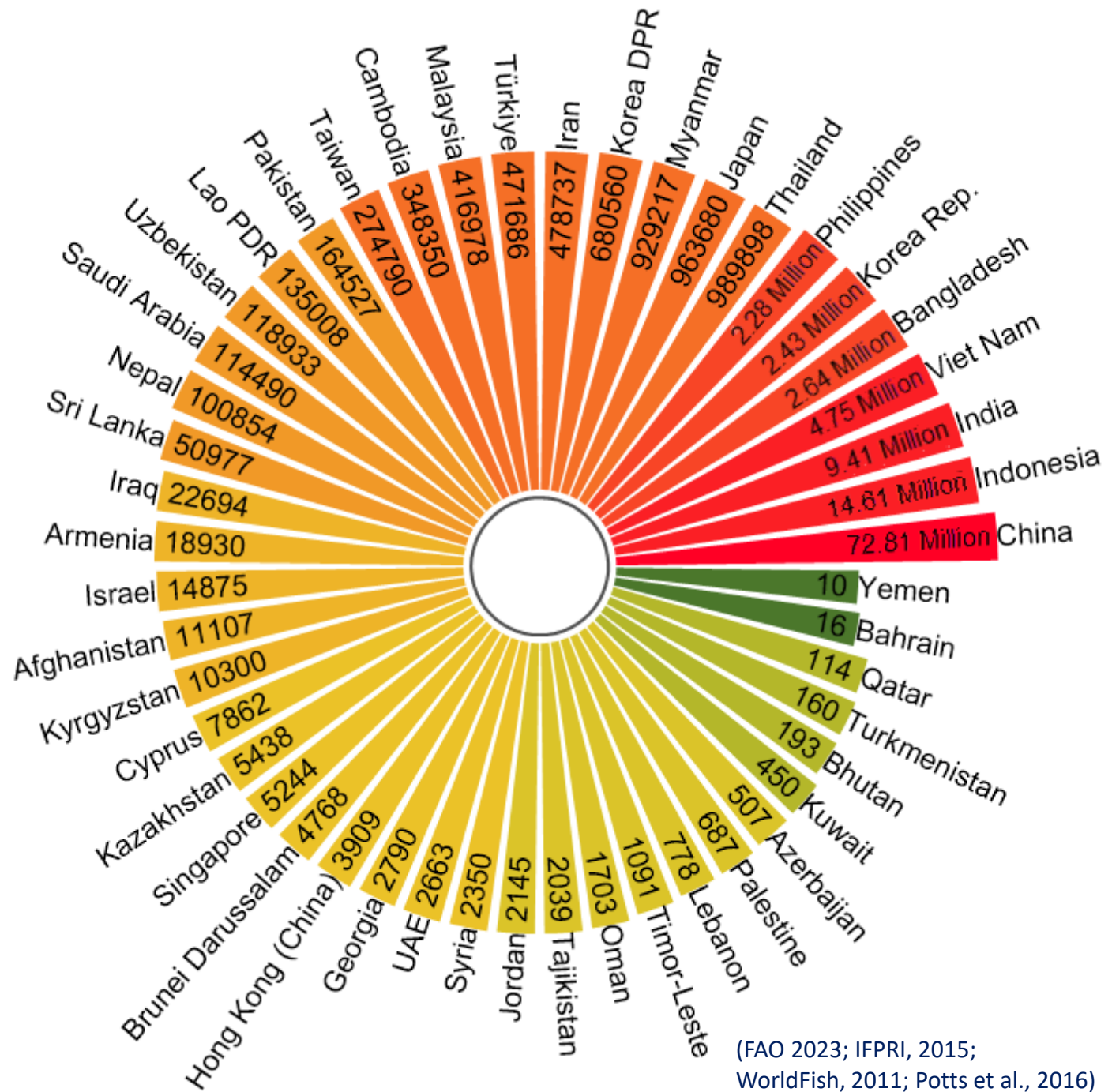
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Asian aquaculture

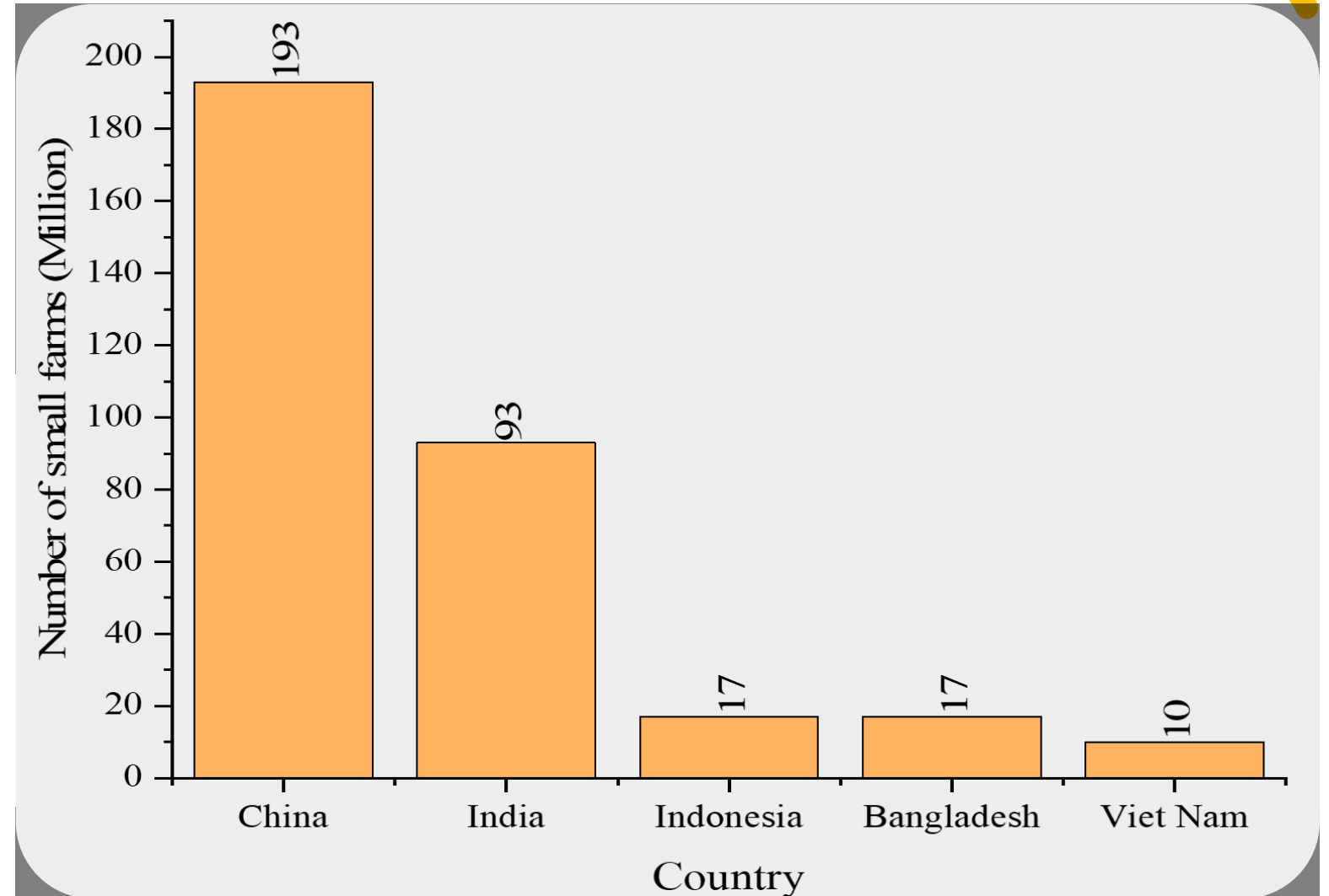


- 92% of aquaculture production (51% of capture Fisheries)
- 34% of global seafood exports (Q) and 36% (V) from Asia
- 58% of aquaculture production from China (but only 15% of global capture fisheries)
- 11% of certified production from Asia (capture & aquaculture)

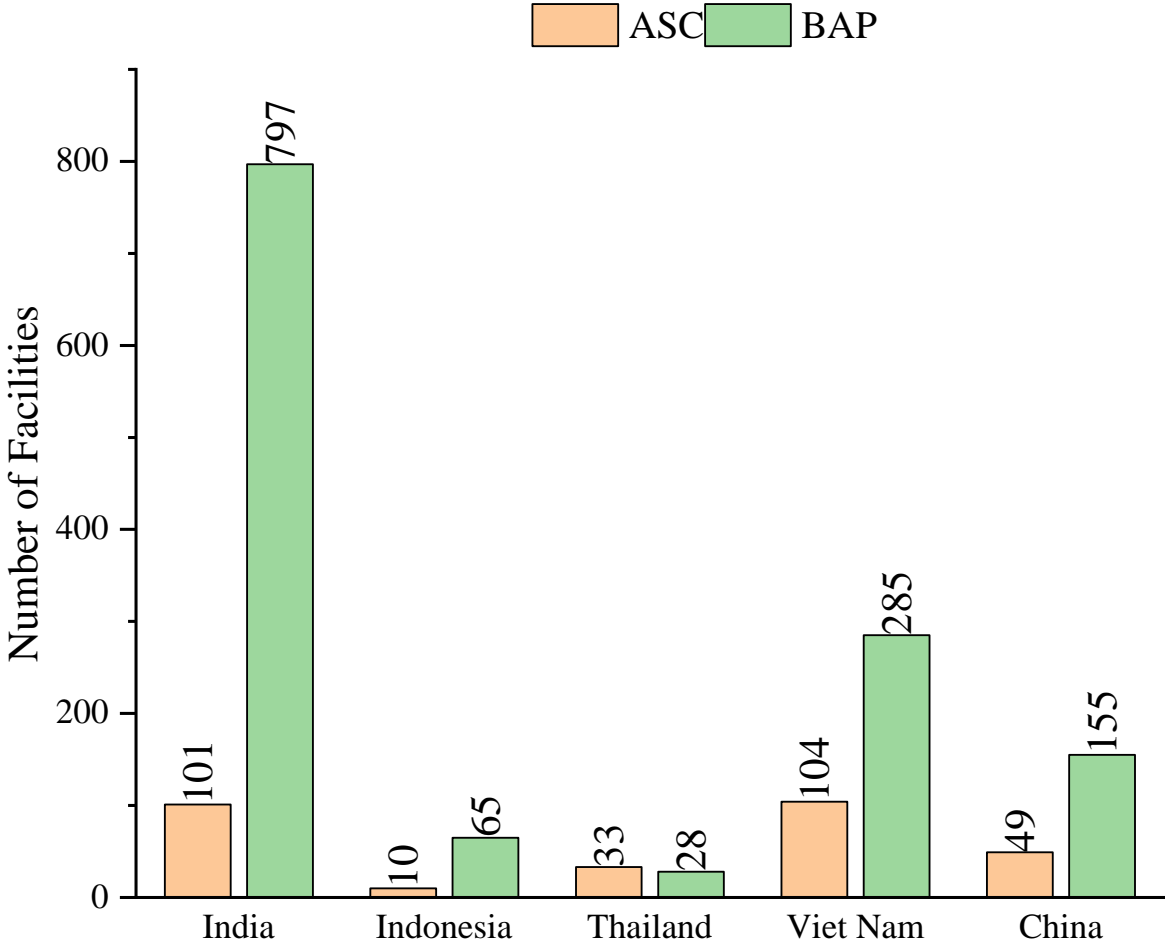


(FAO 2023; IFPRI, 2015; WorldFish, 2011; Potts et al., 2016)

Role of small-holder farms in Asian aquaculture



International Certification Schemes



Source: <https://www.bapcertification.org/Producers>;
<https://asc-aqua.org/find-a-farm/>



National certification for local markets

- Initial focus of certification schemes was export markets
- Supermarket revolution in Asia made certification for local markets necessary
- Modern multinational retailers setting standards for local products from small-scale farmers
- Linking small-scale producers to certification for local market

The logo for Big C, featuring the word "Big" in yellow with a red outline, positioned above a large red letter "C" with a green outline. The entire logo is set against a light green background.The logo for Lotus's, featuring the word "Lotus's" in white with a yellow outline, set against a teal background.

Thai GAP



FAO Minimum Criteria	Thai National Shrimp GAP Requirements
Animal Health and Welfare	Farm Management
	Use of Veterinary drugs, chemicals
	Labour and Welfare
	Social and environmental responsibilities
Food Safety	Farm site registration
	Farm management
	Use of veterinary drugs, chemicals, hazardous substances and probiotics
	Farm sanitation
	Harvest and post-harvest handling before distribution
	Social and environmental responsibilities
	Record keeping
Environmental integrity	Farm site registration
	Farm management
	Use of veterinary drugs, chemicals, hazardous substances and probiotics
	Effluent and sediment management
	Energy source and fuel
	Farm sanitation
Socio-economic aspects	Labour and welfare
	Social responsibility

"Thai shrimp is safe without residues"

Thai GAP: Certified farms 2023 (Freshwater)

Species	Hatchery	Nursing	Grow-out	Total
Freshwater Finfish	394	-	5818	6212
Tilapia	90	82	2580	2752
Freshwater Prawn	65	-	2288	2353
Soft shell turtle	3	-	15	18
Crocodile	11	-	66	77
Frog	65	-	251	316
Crab	-	-	1	1
Others	5	-	44	49

Thai GAP: Certified farms 2023 (Marine)

Species	Hatchery	Broodstock	Nursing	Grow-out	Total
Marine finfish	155	-	-	1368	1523
Shrimp	45	21	311	7836	8213
Shellfish	3	-	-	183	186
Crab	2	-	-	493	495
Sand worm	5	-	-	3	8
Ornamental Fish	2	-	-	3	5
Sea Cucumber	1	-	-	-	1

Vietnam Good Agriculture (and Aquaculture) Practice certification (VietGAP)

Base

- CoCRF of FAO
- 68 critical points to be dealt with

Authority

- Ministry of Agriculture and Rural Development (MARD)

Levels

- GAP level (Standards)
- CoC level (Code of Conduct)

Outlook

- Small-scale extensive aquaculture



China Good Agricultural Practice (GAP)



Categories

- Level 1: GlobalG.A.P Affiliated
- Level 2: National

Type

- Code
- Certification Scheme
- Public voluntary standards

Target

- Crops, livestock and aquaculture
- Global market

Sustainability Check

- Food Safety
- Environmental concerns
- Animal Health and Welfare
- Socio-economics



China Green Food



Categories

- Level 1: GlobalG.A.P Affiliated
- Level 2: National

Type

- Public voluntary standards developed by China MoA
- Certification Scheme

Target

- Crops, Aquaculture, fisheries...
- Global market

Sustainability Check

- Wholesome quality control
- Food safety
- Animal Health and Welfare
- Socio-economics

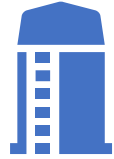


Seafood Traceability System in China

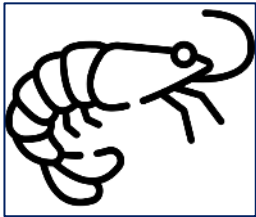
- Inspection, identification and quality detection using quick response (QR) codes and other tracing codes
- Checks for compliance with food safety regulations
 - use of therapeutics and feed inputs in aquaculture
 - post-harvest transportation and handling practices in fisheries
- Good Management Practice (GMP) certification based on the 'clean water, clean food' principle
- Aquaculture producers with a food traceability code can receive 10 percent price premium for their products
- Recommended for all farms
- Severe penalties for non-compliance



Cluster Farming in India (NaCSA) since 2002



752 registered farmer clusters in 9 coastal states



18,211 shrimp farmers



Total culture area of 16,632 ha



Follows India's Coastal Aquaculture Authority (CAA) guidelines

- Standards for wastewater discharge
- List of prohibited antibiotics
- Maximum permissible residual limits prescribed



India: Certification Scheme for Aquaculture Products "Shaphari"

Shaphari = superior quality of fishery products suitable for human consumption
(Farm Certification for residue-free shrimp production)

Authority

- Marine Products Export Development Authority (MPEDA)

Base

- The FAO technical guidelines on aquaculture certification

Components

- Shrimp Hatcheries
- Shrimp Farms

Sustainability Check (Criteria)

- Animal Health & Welfare
- Food Safety
- Environmental Integrity
- Socio-economics



Shrimp Seal of Quality, Bangladesh

Type

- Standard + label

Target

- International market, followed by an EU ban in 1917

Sustainability Check

- Food Safety
- Food Quality
- Environment
- Social/Ethical Considerations



Malaysian Aquaculture Farm Certification (MYGAP)

Promoting good aquaculture practices and greater accountability at the farm level

Management

- Malaysian Department of Fisheries

Coverage

- 271 Farms

Labelling

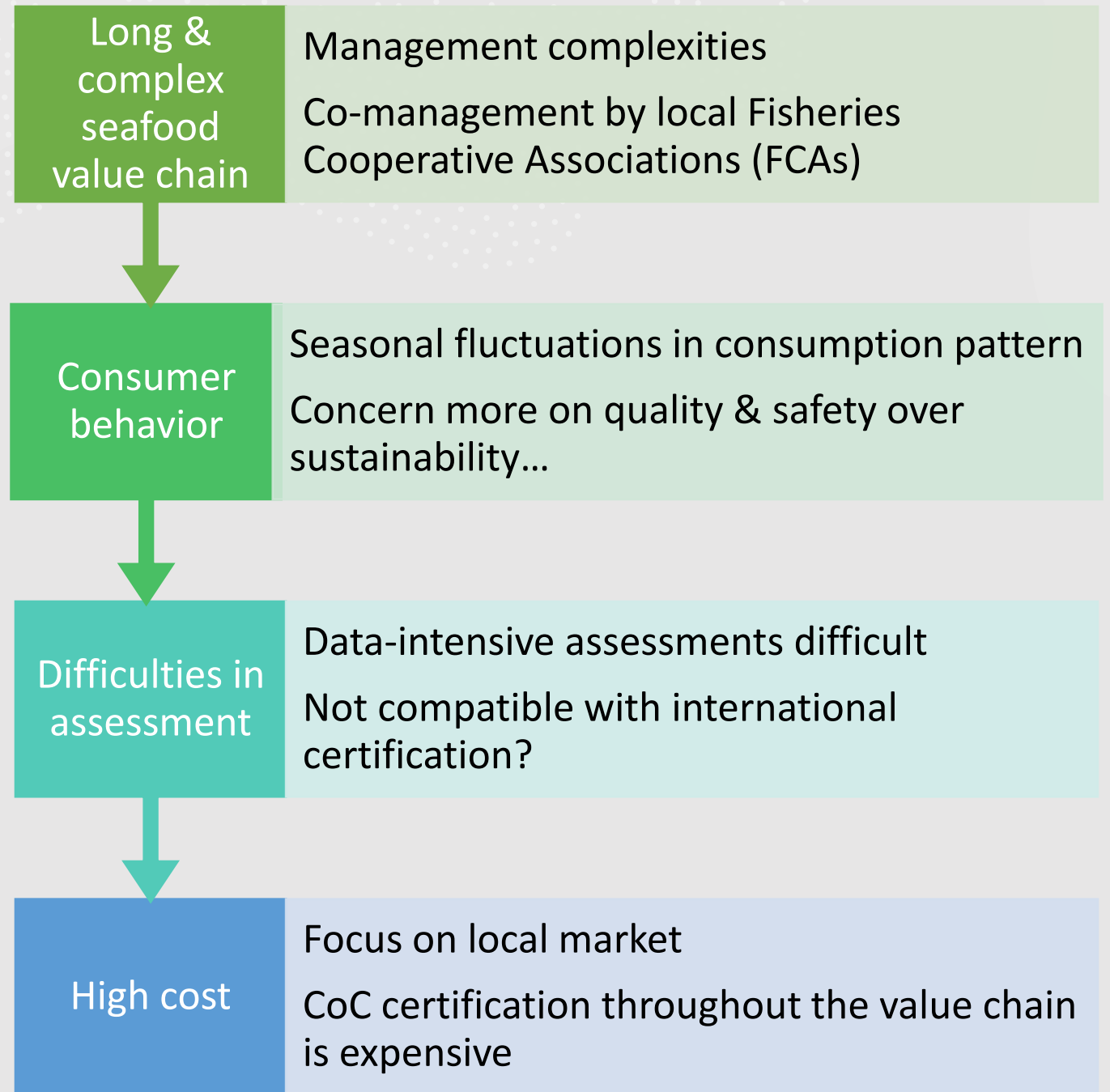
- Nil

Species


- Penaeid and freshwater Shrimp
- Fish
- Molluscs
- Ornamental fish



Marine Ecolabel (MEL), Japan



Issues facing small-holders with respect to certification

- High number of farms involved
 - Small product quantities from individual farms
 - Greater cost for producers than customers
 - Restricted access to finance
 - Market incentives not long-lasting
 - Complex marketing channels that complicate traceability
 - Limited market access, technical knowledge, and essential business infrastructure
 - Many schemes...Which one to follow?
- 

Farmer cooperatives in Thailand

CLUSTER FARMING

A successful model



Several small scale farms

- Shared resources
- Enforcing environmentally sound farming practices
- Supported by National Farmers Council

- Samroyod-Pranburi Shrimp Farmers Cooperative
- Network Center of Excellence in Shrimp Culture, Nakhon Nayok

Certified Seabass for Thai Airways Flight Menu

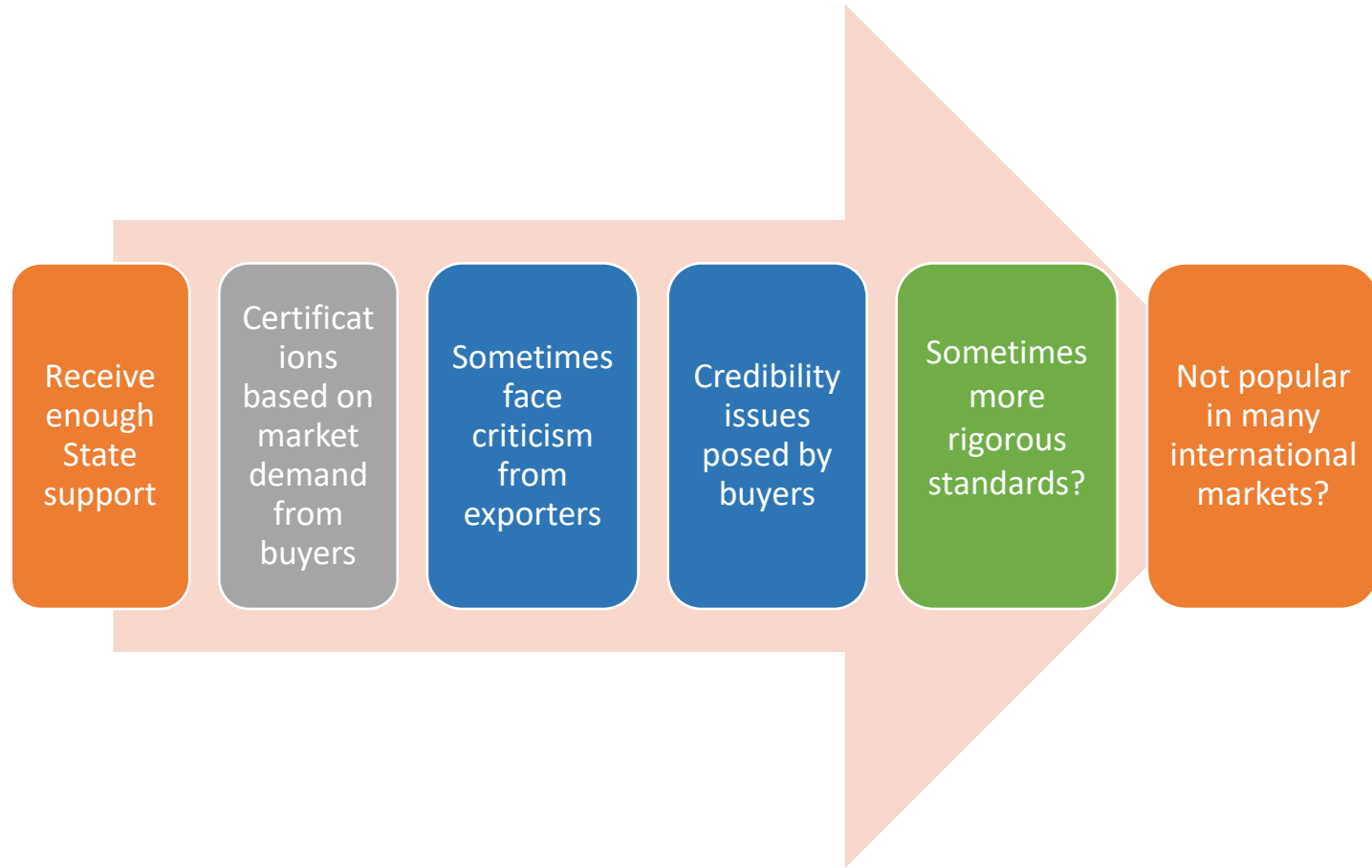
THAI AGRICULTURAL STANDARD
TAS 7016-2015

- GAP and GLP (Good Labor Practices) Certification
- Feed used comes from certified sustainable
- Seabass farmers in Chachoengsao Province under the Thai Marine Finfish Farmers Association & ThaiUnion Feed Mill



Photo credit: www.thaiunion.com

National Certification Schemes: Are they effective?



“Certifications no buyer in the world ever asked for...?”

Integration of National schemes into International schemes

- ASC and VietGAP synergy
- In 2018 the ASC-VietGAP benchmark was launched
- ASC-VietGAP species coverage:
 - Shrimp
 - Pangasius
 - Tilapia
- Goal: for farmers with VietGAP certification to seamlessly transition to ASC certification
- GSSI compliance for Marine Eco-Label



Outlook

Thank you

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Third party certification for small-scale farmers is crucial

Understanding the environmental impacts from small scale aquaculture

Integration of national and international standards

Promote cooperative farming

Group certification for small producers – less financial burden for producers and certifiers

Target local species of national importance

Vertical coordination in the value chain in tandem with processors