

IMBeR West Pacific Symposium

CHANGING WEST PACIFIC
OCEAN: SCIENCE AND
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2021 Online
Event
11/22-25

Dried Small Fish

Ecology, Value Chains
and Nutrition



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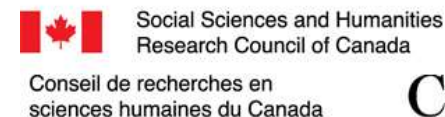
Towards a social economy of dried fish in Southeast Asia

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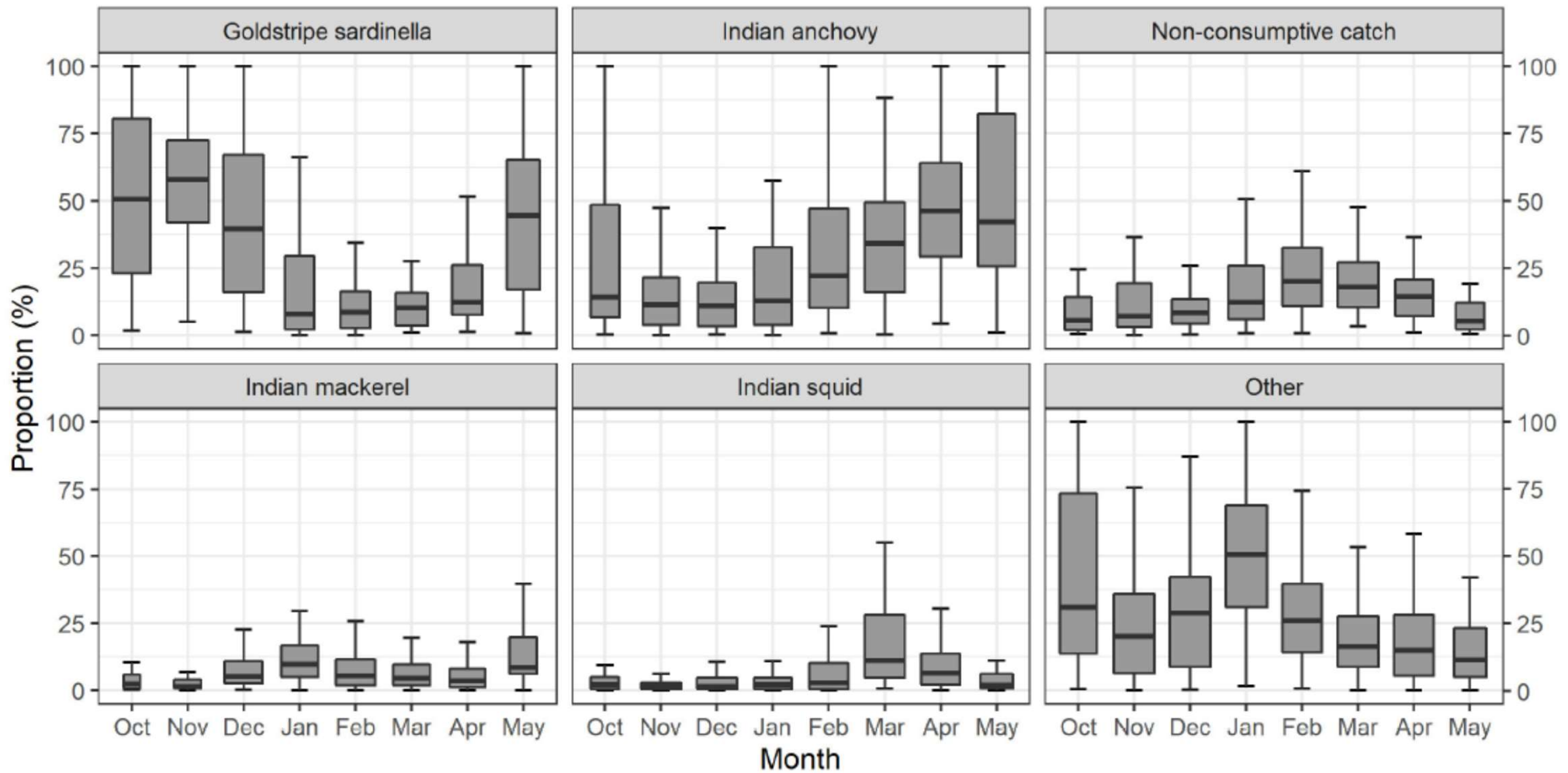
Methodology

- Scoping field studies by DFM Southeast Asia teams in Thailand, Myanmar, Cambodia + secondary sources
- Supplemental information from Philippines
- Differences between scoping study methodologies
- Synthesized key information on small dried marine fish from scoping studies using collectively agreed set of criteria, to allow comparison with South Asia scoping findings

Fish species

- Mainly small pelagics: esp. clupeids (anchovies, sardines) & scombroids (scads, mackerels) - Everywhere
- Smaller/juvenile reef fish (e.g. rabbit fish – Philippines)
- Small demersal species (e.g. Bombay duck – Myanmar)
- Shrimp & squid also important





Purse seine fishing fleet landings in Southern Rakhine State, Myanmar (Exeter et al, 2021, *Frontiers in Marine Science*)

Changes in stocks

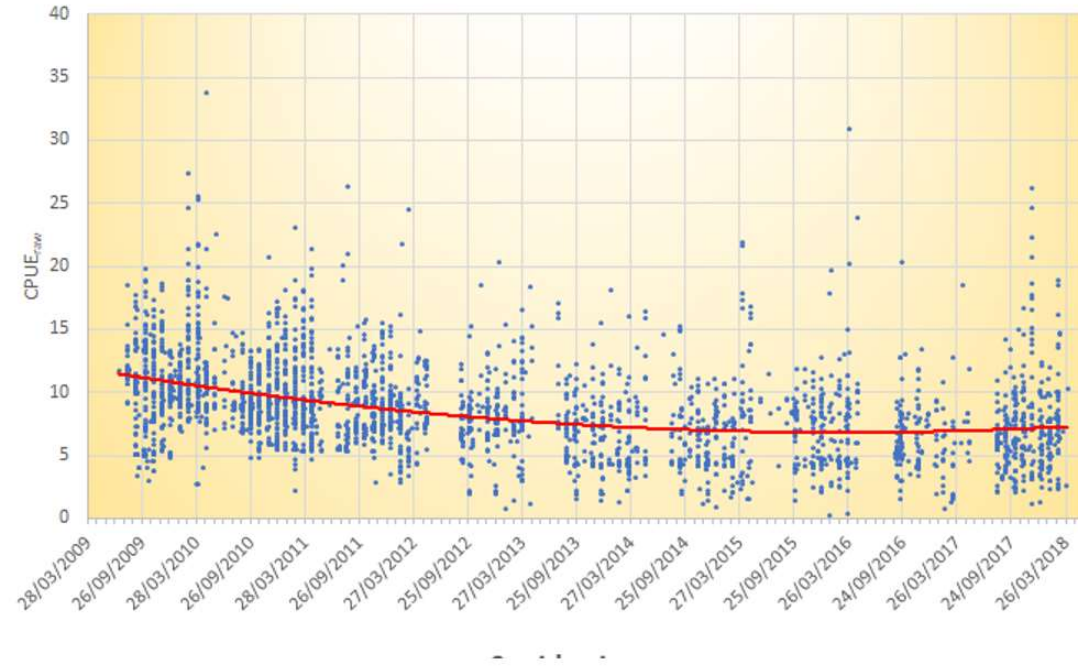
Countries

- Thailand – landing data
 - Anchovy fishery well regulated by multiple laws
- Myanmar many reports of decline, some supporting data
- Cambodia reports of decline, little data
 - Little regulation/management

Observations

- Common perception/anecdotal evidence of catch declines
- Limited publicly available robust stock assessment or fishery dependent data on status of small fish stocks (except Thailand)
- Possible competition between small & large scale, fish meal & food uses

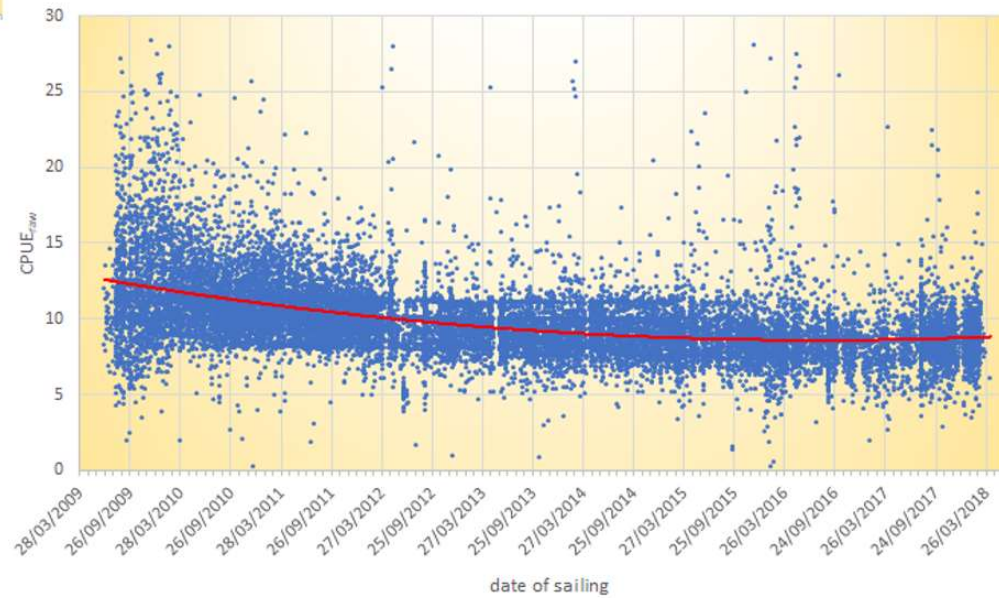
Purse seine



Trend in CPUE 2009-2019 for
purse seine and trawl vessels
operating out of Myeik

Hosch et al, 2021, Marine Policy

Trawl



Dried fish products

Countries

Philippines example:

- Whole salted small pelagic fish “*tuyo*”
- Split small dried reef fish “*da-ing*”
- Fish sauce “*patis*”
- Fish paste “*bagoong*”
- Fermented fish “*buro*” or “*ginamos*”

Observations

- Similar product types, but many different locally specific variations
- Consumed in many ways:
 - Comfort food;
 - Flavour enhancer
 - ‘Food of the poor’
 - High end snack



Many different
product types &
forms



Labor issues/ Gender division of labor

From the countries

- Wholesalers are men, retailers are women (general tendency)
- Small processors at home are women – skills passed down by generation
- Processing factories – labor intensive work by women
- Working conditions in processing factories (wages, occupational health, contract, working hours, etc)

Observations

- Aside from processing factories, not much information
- Dependency relationship between fishers and fish processors?
- Generational division of labor?
- Family labor vs hired labor
- Migrant workers – local vs international



Consumer preference and food safety

From the countries

- Supermarkets vs wet markets vs online marketing
- Traditional dried fish vs new innovation as healthy snack
- Contamination, sanitation standard, product description, handling, packaging, pesticide, microplastic, coloring

Observation

- Consumption differences by location (urban, rural, coastal, inland)
- Patchy information
- With share of wet market diminishing, does that affect small-scale producers?

Economical, nutritional, and cultural importance

From the countries

- Protein, multi-vitamin, mineral
- Philippines – 22% to processed fish in fish expenditure; 5.6 kg of dried fish per year
- Myanmar 6.5kg/capita dried & fermented
- Philippines – staple for breakfast, comfort food, dish enhancer
- Thailand – fried anchovies as snacks, popular for breakfast

Observation

- Data on consumption of dried fish not widely available, how much it contributes to nutrition, and how the decline in dried fish consumption can affect healthy diet.
- Economic importance of dried fish both for producers, traders as well as consumers not much information.
- Dependence on dried fish by class and location?
- How dried fish is rooted to traditional lifestyle and identity of fishers, producers and consumers not much studied

Conclusions

- Very patchy information
- Broad general tendencies, but lots of inter- and intra-country variation in products, practices, preferences
- Very important, but overlooked/marginalized, partly because deeply integrated into rhythms of everyday life.
- Perceived as traditional sector/product but also changing quickly (continuity and change)
- Obsolescence vs persistence?
- Surprisingly dynamic