DFM Cambodia stakeholder workshop report

A Stakeholder Workshop was held in March 2020 to share and validate the initial findings of a scoping study conducted by DFM Cambodia from October 2019 to March 2020. Coordinated by Cambodian Institute for Research and Rural Development (CIRD) in collaboration with Centre for Poverty Analysis of Sri Lanka (CEPA), the DFM Cambodia research project aimed to understand the dried/processed fish economy, with attention to historical, social, cultural, economic and policy variability, in the initial scoping phase of the study. The project has a particular aim on tracing the value chain forward and backward starting with fish processing, moving on to trading within the country and outside the country-exports and imports. Feedback, comments, and inputs from participants of the workshop have been collected and analyzed in order to identify gaps.

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Dried Fish Matters:
Mapping the social economy of dried fish in South and Southeast Asia for enhanced wellbeing and nutrition

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Introduction

Globally, for many of the most vulnerable peoples of the South and Southeast Asia region, dried/processed fish is of vital nutritional, economic, social, and cultural importance. Despite this, the diverse and complex economy that produces and distributes dried fish, and the threats to it, are all but invisible in research and policy. The Dried Fish Matters project, based at the University of Manitoba in Canada, brings an interdisciplinary team to address this major oversight. Funded by the Canadian Social Sciences and Humanities Research Council, the project covers six other countries in South Asia and South East Asia, including Cambodia. This seven-year (started in mid-2018) research and action project aims to map the social economy of dried/processed fish in South and South East Asia and as the first step each country plans to complete a scoping phase, which aims to maps the dried fish economy in each country.

In Cambodia, the project aims to understand the dried/processed fish economy, with attention to historical, social, cultural, economic and policy variability, in the initial scoping phase of the study. The project has a particular aim on tracing the value chain forward and backward starting with fish processing, moving on to trading within the country and outside the country-exports and imports, using available secondary data and primary data to fill the gaps.

The scoping phase of DFM Cambodia was planned from October 2019 to March 2020; however, with the changes to work patterns as a result of COVID 19, the scoping phase was extended until end of July 2020. This phase was coordinated by post-doctoral fellow Gayathri Lokuge, in collaboration with Cambodian Institute for Research and Rural Development (CIRD), advised by Kyoko Kusakabe, Derek Johnson, Melissa Marschke, Ben Belton and Shakuntala Thilsted.

The scoping phase focused on analyzing existing literature and identifying knowledge gaps related to processed products, value chain actors, production and trade; the contribution of dried/processed fish to livelihoods and food security; governance and policy; and links with broader geo-politics and development. Mapping the dried fish economy during the scoping phase also supported the goal of identifying the actors along the value chain and collecting exploratory primary data in order to fill the gaps identified through the review of literature and secondary data.

The scoping phase research drew on a mix of data sources: starting with an extensive literature review (to be published by DFM), complemented by primary data, which will be presented below.

As a concluding step in the field component of the scoping phase, a stakeholder workshop was conducted on the 3rd of March, 2020, to address the objectives below:

- Validation of scoping phase findings for Cambodia
- Obtaining inputs on priority areas for second phase of research in Cambodia
- Exploring possible new partnerships and collaborations

This brief report documents the discussions conducted during the stakeholder workshop and the subsequent meetings and discussions among the study team and will be used to support discussion and decision-making on future research. The report largely follows the agenda of the workshop (see Annex I), summarizing the main input and discussion sessions, and ends with a section on areas for further research on dried/processed fish for Cambodia and possible collaborations and working modalities.

Workshop summary

Introduction to DFM global and workshop objectives

Prak Sereyvath from CIRD welcomed the participants, comprising fish processors from six Provinces, I/NGO representatives, private sector representatives, researchers, and government officials, working on and in fisheries and fish processing in Cambodia.

Next Derek Johnson provided an overview of DFM global (see Annex II), including a working definition of “dried fish” which encompasses, not only the “typically” sun dried fish, but also a wide range of other types of processed products, such as salted, pickled, and fermented fish. The key element of the DFM definition of dried fish is that it refers to the range of products which are neither fresh nor frozen, nor which require refrigeration. The four main components of DFM were also presented, followed by an overview of the global DFM team, ending with presenting the objectives of the stakeholder workshop.

Presentation of scoping research findings

Gayathri Lokuge presented the summary findings of the DFM Cambodia scoping phase (see Annex III), drawing on the review of published literature and the analysis of secondary data, such as fish and processed fish production and number of producers, complemented by primary data comprising:

- 16 key person interviews with experts in fisheries and processed fish sector in Cambodia
- 58 semi-structured interviews with processed fish traders, processors and fishers across Cambodia
- observations conducted in 26 city, 26 Provincial and District market (8 in Phnom Penh and 18 outside Phnom Penh)
- 40 surveys via a rapid appraisal conducted in the Orussey market in Phnom Penh, the biggest processed fish wholesale point in Cambodia
- a mapping of the processed fish stalls and documenting processed fish products in 90 stalls at the Orussey market
- detailed photo-documentation of fish processing, trading, and fish capture
- 10 in-depth discussions with female traders at the Orussey market

The scoping research unpacked “dried fish” within the Cambodian context, which presents a rich cultural history of processing and consumption of a diverse range of fish based products – including *Trey Ngeat* (salted sun-dried fish), *Trey Cha’eur* (smoked fish), *Pa Ork* (fermented fish with sticky rice), *Yahe* (fermented shrimp), *Prahoc* (fish paste), *Mam* (fermented fish with roasted rice powder), *Kappik* (fermented shrimp paste), *Tak/Tuk Trey* (aged fish sauce), and *Tud Try* (non-aged fish sauce). Gayathri’s presentation highlighted that the published body of research on the processed fish sector is fragmented, as the literature lacks a specific focus on the processed fish sector. The body of work that does

focus specifically on fish processing in Cambodia is marked by a focus on technical analysis in areas that include the chemical composition of processed fish and the methods followed in processing fish paste and fermented fish.

The presentation focused on four specific sub-themes, decided based on discussions within the study team prior to the workshop: Economy, food culture and nutrition, sustainable development, and governance. Each section of the presentation included an analysis of available literature and secondary data, knowledge gaps and potential questions for further research and findings from the scoping phase DFM Cambodia.

The following list provides a brief summary of key issues and knowledge gaps raised within each of these four sub-sections. (See Annex III and the forthcoming literature review and scoping phase study findings report for further details.)

Economy

Dried fish are an important economic activity and livelihood option, especially for the poorer segments of the population and women.

- In general, information on marine fish-based products
- Analysis of commercial processing plants
- Engagement of women and children
- Ways and methods of inter-generational knowledge, skills and contacts transfer
- Sourcing of fresh fish for processing: Proportions of wild fish, aquaculture, and rice field fisheries
- Trade of processed fish: How do processed products flow within the country and cross-border?

Food culture and nutrition

Dried fish are important for food security and nutrition, and as a cultural preference through analysis focusing on consumption and production.

- Changing food consumption preferences/tastes and practices among Cambodians
- Nutritional value of traditional processed products apart from *Prahoc*, etc.
- Food safety and hygiene issues: Technology transfer

Sustainable development

Dried/processed fish linkages with sustainable development need to be developed.

- Decrease in certain types of fish, and catch per unit and impact on nutrition and food security provided by processed fish
- The role of aquaculture
- Climate change and impacts on processed fish livelihoods, food security
- Role of tourism

Governance

There is a need for identification of policy gaps and coordination with regard to dried fish.

- Inter-development sector coordination and synergies towards policy coherence
- Role of community fisheries in processing
- Women's voices to be better included in policy, governance, and practice
- Minimum learning based on previous experiences from development projects that target fish processing

The discussion following the "summary of findings" presentation primarily focused on:

a) declining fish stocks particularly in the 2019-2020 fishing season and the potential impacts of this trend on food security, nutrition and livelihoods;
b) concerns with food safety such as use of chemicals for preservation, and the need for quality standards and certification processes such as Geographic Indicator (GI) for processed products;
c) changes in consumption patterns, especially *prahoc*, across different consumer segments, generations, and classes (urban vs. rural); and
d) potential for strengthening value addition along the value chain.

Questions were also raised on the process of identifying specific stakeholders for engagement for DFM Cambodia and on methodologies/tools to be adopted such as Catch per Unit Effort (CPUE), catch monitoring of a selected sample of landing sites, and systematic monitoring of processed fish sales at selected markets, in order to arrive at a relatively reliable measure of production and trade of processed fish products in Cambodia.

Group discussions: World Café session

A World Café discussion session was structured according to the four thematic topics introduced in the research findings presentation, with one facilitated discussion group formed for each topic. Participants were invited to move from one group to the other, spending about five minutes contributing to the discussion in each group. Discussion points were visualized and presented to the plenary at the end of the session.

Key areas for research and intervention raised in this discussion are summarized below (see Annex IV).

Economy (value chain, economic diversification, micro-enterprises, labor, etc.)

- Identifying and targeting the production unit, and understanding changes to production processes such as household level production with a view to strengthening vulnerable processors who lack access to capital, technology
- Changes in sourcing fresh fish for processing with climate changes and development related activities contributing to decline in fish stocks and the role of aquaculture
- Strengthening of horizontal and vertical linkages along the value chain
- Improving product quality and distribution of benefits along the value chain

- Identification of new markets and strengthened market linkages
- increased processing of quality marine fish products
- Learning lessons from past initiatives such as “One Village One Product” and innovations based on these models such as a “One Commune One Product” model, to ensure successful scale-up

Culture (nutrition, food security, tradition, etc.)

- Continued concerns on food safety related issues, lack of standards being applied and monitored and the need for further research and analysis on these concerns, including chemical composition of processed fish products in the market
- The need for more awareness of maintaining and ensuring nutritional value among processors including the potential practice of fact sheet on packaging
- Increased awareness on maintaining quality standards at different levels, through self-imposed mechanisms, at community level through collectives and disseminating product standards to the processors
- Further analysis of the implications of increasing fish feed production and trade-off with fresh and processed fish for food security and nutrition of humans

Sustainable development (ecological, tourism, conservation, climate change, etc.)

- Conservation of fish species that face threats of extinction and species with high mortality rates
- Conservation of floating forests (parallel to seasonal rain falls and floods) and fish refuge conservation to protect aquatic habitats
- controlling practices that are harmful to the environment such as burning of forests, use of agrochemicals linked to strengthening sustainable tourism
- Reforestation to prevent erosion and for climate change mitigation
- Continued analysis of impacts of development initiatives such as dam construction for hydro projects on food and livelihood security of Cambodians and exploring viable options for mitigating negative impacts such as rehabilitation of areas dug up for dam construction
- Developing an app based online data storage to share data between different users along fisheries value chains and other stakeholders

Governance (community fisheries, gender, etc.)

- Strengthen laws and law implementation on land use planning and management, including increased understanding of displacement of people from the Great Lake and linked waterways, and measures to mitigate negative impacts and ensure sustainable and secure livelihoods for them
- Providing more support material and human resources for conservation activities
- Enhancing the gender balance in community fisheries and creating collectives/groups for processing
- Strengthening community fisheries in general

- Discussions, analysis, and engagement of different stakeholders on ways and methods to balance increase in fish processing with conservation requirements
- Encourage collaboration between government agencies and stakeholders

Group discussions: Potential areas for further focused research for DFM Cambodia

Based on issues raised at the World Café session, the study team identified the following three topic areas for further discussion with the workshop participants, with the aim of identifying potential research areas and challenges and solutions for each sub-theme (See Annex V for further details). Derek Johnson summarized the main points emerging from these discussions at the end of the workshop and presented an outline of next steps for DFM Cambodia.

Value chains

What are they key challenges in processed fish value chains and what possible solutions are there to address them?

- Repeated concerns about food safety/quality and nutrition value of process fish products
- Constrained access to capital and technology further constraining access to markets (products using traditional/home based methods are more expensive)
- Lack of information and analysis about current consumer demands and preferences, best practices, branding practices and knowledge, market opportunities, nutritional benefits of fish
- Introducing a value chain cluster approach
- Increasing awareness of food safety and nutritional value in processed fish products among consumers

Collaboration

What are strategies to build collaboration between different community, government, private sector, and NGOs to address economic, nutrition and food security, and environmental problems? What do these groups need? What are the barriers to building collaboration? How to overcome those barriers?

- Strengthening communication and information sharing among stakeholders through an online app
- Increasing trust, respect, transparency, accountability, mutual learning and development opportunities among stakeholders
- Explore opportunities for effective public-private partnerships
- Increasing awareness on rights, responsibilities and regulations among processors and consumers

- Sharing of lessons from other similar country contexts and establishing channels for exchange of ideas and best practices through DFM

Adaptation

What are the large-scale social, economic, and environmental changes that are taking place that affect the social economy of dried fish (such as decreases in water/annual flood level, increase in migration for work, increase in investment, etc.). How to strengthen the ability of participants in the dried fish economy to adapt to those changes? How can existing institutional arrangements be strengthened? What new institutional innovations are needed?

- Strengthening Adaptation to climate change and other external threats
- Formation of groups and facilitating collective processing and marketing to meet market demands and minimize external shocks and threats
- Analyzing impacts of currently used adaptation techniques such as migration for work or work in tourism sector and addressing challenges and issues
- Exploring potential of sustainable aquaculture

Conclusion and next steps

Overall, the study team felt that the stakeholder workshop was able to achieve the objectives it set out, and generated a detailed, grounded discussion on different elements of the "social-economy of dried fish value chains" in Cambodia. The recurrent themes and trends emerging from discussions during the workshop largely overlap with the knowledge gaps and emerging findings from the scoping phase of the study. These themes and knowledge gaps are distilled into a set of potential research areas and questions below, to be refined further at the completion of the scoping phase of DFM Cambodia.

The workshop participants included powerful and articulate groups of fish processors from about six regions in Cambodia, many of them women, who spoke compellingly about the current environmental, economic, and governance challenges they face, informing and grounding the discussions. Other participants included representatives of Government Fisheries Administration, IFREDI, UNIDO, Vissot, and various other local and INGOs. There was a great deal of interest in collaborations from the attendees.

Sereyvath from CIRD organized three meetings with INGO and donors the day following the workshop, and these proved useful to establish/renew networks in and around Cambodia for the study team.

One of these was with WorldFish, where we met with the new country director, Pablo Del'Innocente and three staff, Sarah Freed, Peter Jackson, and Kausal. The main message from the meeting was the WF is in a reorganization phase that will last three months or so. Precisely how we might work with WF Cambodia in the second phase of DFM Cambodia is thus not yet clear.

The other two meetings were linked to a new EU project, largely on value addition in aquaculture value chains in Cambodia, but with some attention to capture fisheries as well. Derek, Ben, Kyoko, Sereyvath and Gayathri met Olivier Joffre at Agence France de Développement, and Aymeric Roussel and Mak Sithirith at the EU. Separately, and more informally, Ben, Gayathri, and Derek met Rick Gregory of the FAO over dinner.

From the DFM point of view there is a potential opportunity to link to the EU project. Aymeric from the EU invited DFM to present to the Technical Working Group on Fisheries, and there is a possibility of leveraging DFM funds to get support for a stacked value chain survey in Cambodia through this project. Rick Gregory leads the capture fisheries component of the project through DFO. AFD leads the aquaculture work.

The study team met on the 2nd March, following the stakeholder workshop and the external meetings, in order to discuss next steps, and the key points of this meeting are summarized below.

Given the seemingly very high donor involvement in the fisheries sector in Cambodia, especially through the EU funded Capfish project, the implementation of a stacked value chain in Cambodia, may not be fully justified in terms of resource use. However, it also seems as if the ongoing projects are not focusing on the small-scale fishers/ fish

farmers/processors, rather their focus seems to be on the medium scale producers and processors. Therefore, there may be better scope to focus on small scale home-based producers in terms of research as well as pilot interventions. A focus on home-based producers can also be linked to pilot interventions such as GI certification that CIRD is interested in implementing. Such a focus may also include community-based climate and environment change monitoring and analysis, over an extended period of time.

The following are some tentative research ideas discussed at this meeting:

- **Home-based processors:** linkages among tourism, out-migration for work, climate change and processed fish, as shaping the dried/processed economy in Cambodia. These themes are especially linked to the “adaptation” sub-theme identified and elaborated during the workshop.
- **Aquaculture and its linkages with the processed fish sector:** The increase of aquaculture production and the proportion/use of farmed fish in processing and use of trash fish for fish feed, especially given the steep decline in capture fisheries in 2019/2020 fishing season due to low flooding.
- **Proposed pilot initiative:** Geographic Indicator (GI) certification based on an understanding of changing processed fish consumption patterns and food preferences, including food safety related concerns also linked to urbanization and the increasing role played by supermarkets in the trade of processed products. CIRD had already expressed their interest in this and have identified tentative sites and *Prahoc* as a product.
- **Transition phase:** Given the overall timelines for the scoping phase completion for all the countries is mid-2021, and the Cambodia team would be about 1 year ahead, we are to use this one year as a transition phase. There is a possibility that in this transition phase, NGOs receiving funds to keep some field presence going, maybe even request for some money from EU, and use DFM money as seed money to raise further funds
- A small but useful **bridging project** between the scoping and intensive project phases would be to have CIRD identify traders and producers who could provide regular price and catch volume data over the next four years so that we could get a time series to track these key economic indicators in the face of major disruptions to the environment.

There is continued scope to examine the institutional context within which international institutional collaboration around fisheries sector development takes place from a social economy or food systems perspective.

Annex I. Workshop agenda

Time	Detail	Presenter/ facilitator
08:00-8:30	Registration	CIRD admin. team
08:30-9:00	Opening session: Welcome remark and introduction to the workshop (10 mn) Introduction about Dried Fish Matters project (20 mn)	Prak Sereyvath, Director of CIRD Dr. Derek Johnson, Associate Professor, Anthropology, UM
09:00-9:10	Research questions, process, methodology and expected results	Dr. Kyoko Kusakabe, Professor, Asian Institute of Technology (AIT)
09:10-9:40	Draft findings from the scoping phase Gaps in research on the processed fish sector in Cambodia	Dr. Gayathri Lokuge, Senior Research Professional, CEPA, Sri Lanka
09:40-10:20	Feedbacks, Comments and Inputs from invited participants and experts	Facilitated by Prak Sereyvath
10:20-10:40	Coffee break	Arranged by Hotel
10:40-12.00	World Café: Brainstorming of research areas in small groups	Facilitated by: Dr. Kyoko Kusakabe, Professor, Asian Institute of Technology (AIT)
12.00-13.30	Lunch at Himawari hotel restaurant	CIRD admin. team
13.30-14.30	DFM Methodology: Stacked Value Chains and other methods	Dr. Benjamin Belton, Rural Sociologist, Michigan State University
14.30-15.30	Group discussion on research ideas	Facilitated by Dr. Derek Johnson, Associate Professor, Anthropology, UM
15.30-15.45	Tea break	

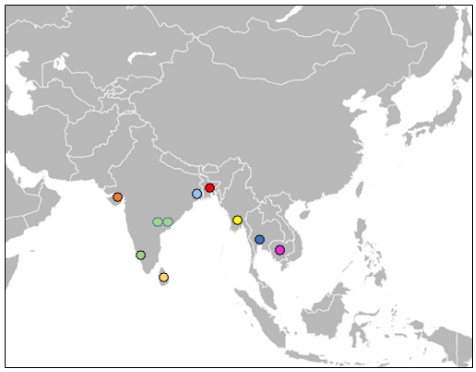
Time	Detail	Presenter/ facilitator
15.45-16.30	Discussion: Outcome sharing and way forward (based on group work above)	Facilitated by Prak Sereyvath
11.40-12:00	Summary and closing	Dr. Derek Johnson, Associate Professor, Anthropology, UM

Annex II. Presentation by Derek Johnson

What is the project?

Dried Fish Matters: Mapping the Social Economy of Dried Fish in South and Southeast Asia for Enhanced Wellbeing and Nutrition

7 years in 6 countries



What is dried fish for DFM?

Why does dried fish matter?

Importance:

- Portable and lasting
- Accessible to poor populations
- Critical to nutrition security in South and Southeast Asia
- Culturally important

But dried fish is neglected

What is the project?

Dried Fish Matters: Mapping the Social Economy of Dried Fish in South and Southeast Asia for Enhanced Wellbeing and Nutrition

- Two parts:
  - Research
  - Development

- The social economy idea

What is the project?

Dried Fish Matters: Mapping the Social Economy of Dried Fish in South and Southeast Asia for Enhanced Wellbeing and Nutrition

Four components:

1. Mapping of dried fish value chains across region
2. Studies of rich socio-economic variability
3. Food and nutrition contribution of dried fish
4. Development and policy interventions around dried fish

Project phases

1. Scoping 2019-2021
2. Intensive research and pilot interventions 2022-2026

• Interwoven with student research and external collaborations

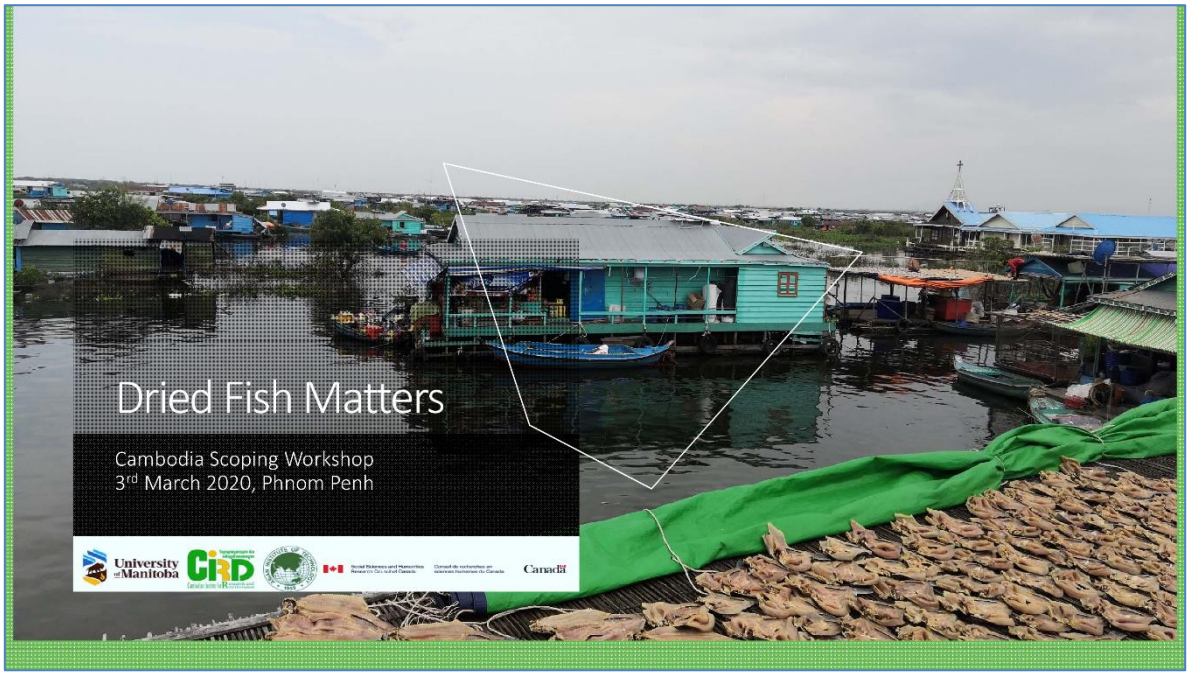
DFM participants

21+ partners 50+ collaborators 5+ allied projects

Goals for today's workshop

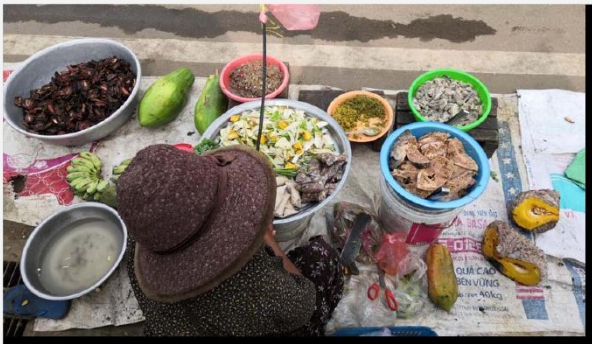
1. Validation of scoping phase findings for Cambodia
2. Inputs on priority areas for second phase of research in Cambodia
3. Possible new partnerships, collaborations
   - Timeline to phase 2 in Cambodia

Annex III. Presentation by Gayathri Lokuge




Definition of 'dried' fish in Cambodia?

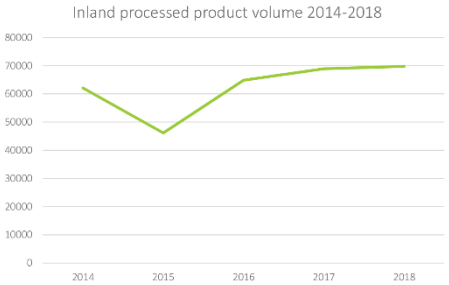

Does dried fish matter in Cambodia?
Economy
Estimated 6 million as temporary, permanent and seasonal
GDP contribution of fisheries 8-10%
Food Culture
Nutrition
3.55kg of fresh fish and 0.56 of Prahoc consumed per week per household
Fish and fish based foods provide 70-75% of protein intake for Cambodians
Sustainable Development
Connectivity to the Mekong reduced by 31% and predictions for 4-40% of fish catch decrease
Governance
516 Community fisherie established by 2018
53% out of total full time fishers are women

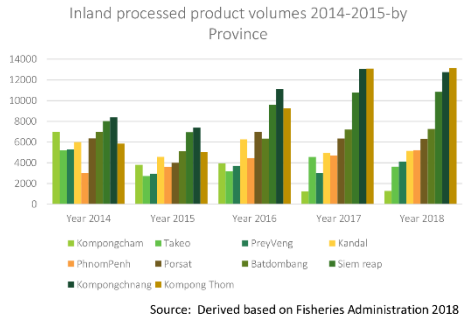


Economy

From published studies

- Value chains of specific fish species- Ex: Snakehead and low value fish
- Socio-economic characteristics of those who engage in fishing, fish processors and traders
  - Role played by women, gendered livelihood
  - Labour arrangements including family labour
  - Value added through processing
  - Costs involved in processing and profits generated at the household level
- Secondary data on volume of production, number of processors





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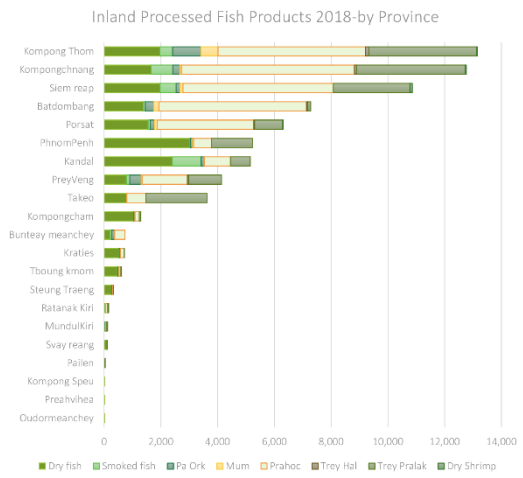
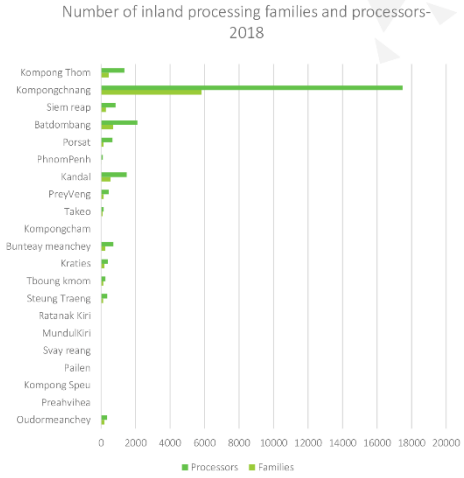
Secondary data





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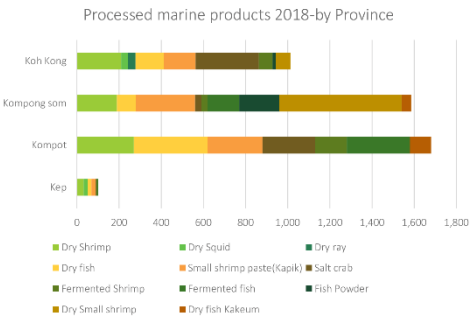
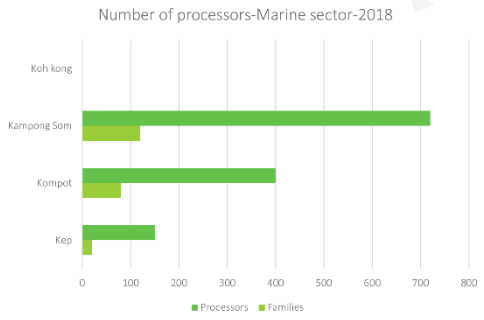
Secondary data





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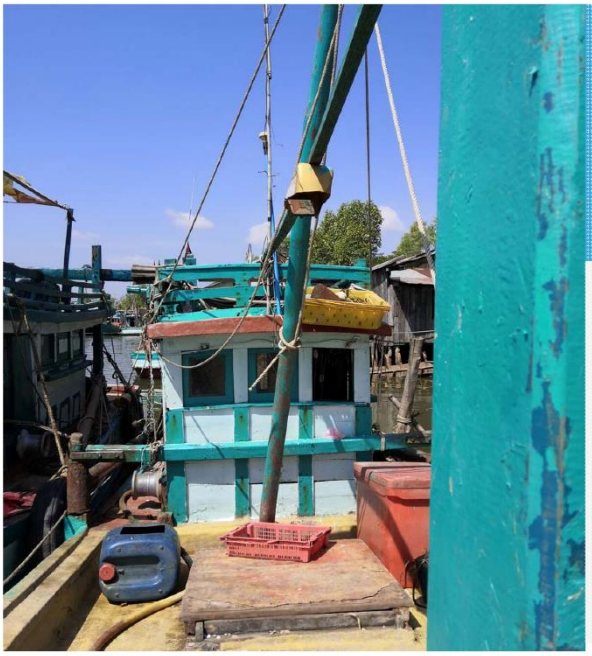

Knowledge gaps and questions

- Marine fishing based products
- Commercialised processing plants
- Engagement of women and children
- Inter-generational knowledge, skills and contacts transfer
- Sourcing of fresh fish for processing
  - Proportions of wild fish, aquaculture and rice field fisheries
- Trade of processed fish- how do processed products flow within the country and cross-border

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Findings: Diverse range of actors in the value chain

Type of processor	Characteristics
Fishing families	'Worse off' households who use processing as a secondary income source for the family (ex: elderly women supporting themselves, and their family through fish processing). Processing happens at home, primarily by household member/s. Processed fish volume is less than 100kg per day during the peak season. Products are mostly sold to consumers in the village. (household/small scale)
	Households with a steady income from fishing or engaging in fishing but primary income being from another source such as remittances, engaging in processing as a secondary livelihood activity. Processing happens at home by household member/s mainly and in the peak season, with 1-3 hired workers. Products are traded within the village and sold to middlemen. (household/small scale)
Fishing cum farming families	Farming primarily in small islands on the water bodies, during the season.
Farming families	Subsistence purposes only
	Subsistence purposes mainly, but sells a certain proportion based on surplus production
Processing families	Households with no members involved in fishing or farming. (small to medium scale). Processing happens at home, involving household members and hired labour during peak season.
	Households with no members involved in fishing or farming, processing or semi-processing plants located in a separate location from their homes. (small to medium scale). Volume of production per day is 800kg-10Tonnnes per day during peak season. At least some of the fish species are sourced from Thailand/Vietnam and the rest from floating villages around the Tonle Sap lake. Products are sold to middlemen/traders within the Province and outside the Province, including Phnom Penh markets. (Ex: processors at Battambang Psar Prahoc)
Processing factories	Primarily in Phnom Penh and Sihanouk, employing 40-60 workers, 80% women

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Range of labour arrangements

Type of processed product	Type of processing activity	Payment term	Payment value	Comments
Semi processed fish paste	Cutting head, gutting and cleaning	Per kilogram	300r (0.75USD)	Approximately 100kg processed per day per worker (BT PR 01)
Pa Ork	Mixing with salt	Per tonne	30,000r (7.50USD)	Approximately 3-4 tonnes processed per day per worker (BT PR 03)
Smoked fish	Cleaning fish and smoking	Per day	40,000r (10USD)	They work throughout the year
Dried prawns	Cleaning prawns	Per vat/container	9,000r (1.75USD)	8-10 vats of prawns cleaned per day per worker (KP PR 01)
	Cleaning prawns	For 2-3 hours per day	10,000r (2.50USD)	

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Processed fish selling sources (blue) and buying sources (green) by traders at provincial and district markets

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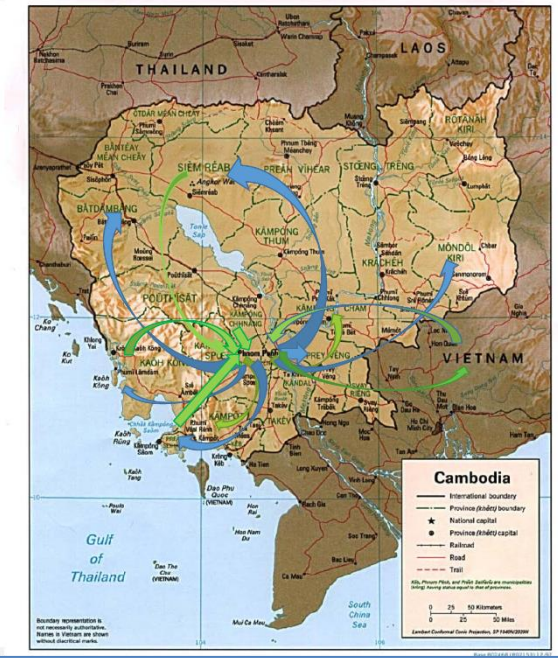
Source: Primary data-DFM Cambodia Scoping study

Processed fish buying routes (green) and selling routes (blue) by traders at the Orussey market



Food culture and nutrition

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From published studies

- Historical tradition of processed fish consumption of Cambodians
  - Fermented fish as an important part of the diet of the Southeast Asians in general and of Cambodians
  - Historical origin and diffusion of fermented fish in the Southeast Asian region linked to people's movements
    - Close links with rice farming and the need to preserve for lean fishing periods
  - Exchange practices of unhusked rice and fish/processed fish
- Chemical and microbial make-up of processed products
- Nutrition value of processed products
- Potential of locally developed products as nutrition supplements

Knowledge gaps and questions

- Changing food consumption preferences/tastes and practices among Cambodians
- Nutritional value of traditional processed products apart from Prahoc etc.
- Food safety and hygiene issues
  - Technology transfer

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Scoping phase findings

- Processors and traders concerned regarding quality and food safety
- Clear preferences for processed products based on wild caught fish and not fish from aquaculture
- Changing consumer demand of processed products, that may have health and food safety related impacts-food colouring
- Sourcing Provinces- Kampot for Yahe and Kampong Chhnang for smoked fish, Battambang, Siem Reap and Kandal for Prahoc, Koh Kong for Dried shrimp

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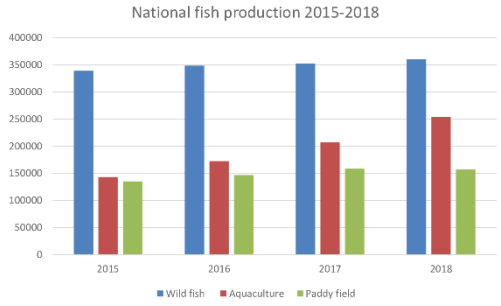
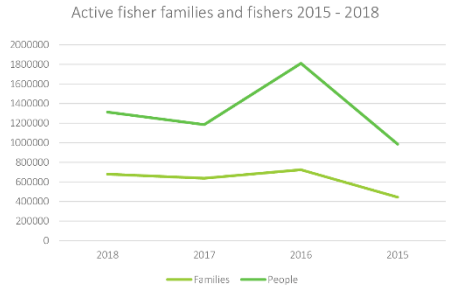
Sustainable development

From published studies

- Impact of development/energy needs and declining fish catches
- Over-exploitation
- Potential loss of nutrition due to dams
- Climate change and fisheries related livelihoods, low adaptive capacities





Source: Derived based on Fisheries Administration 2018

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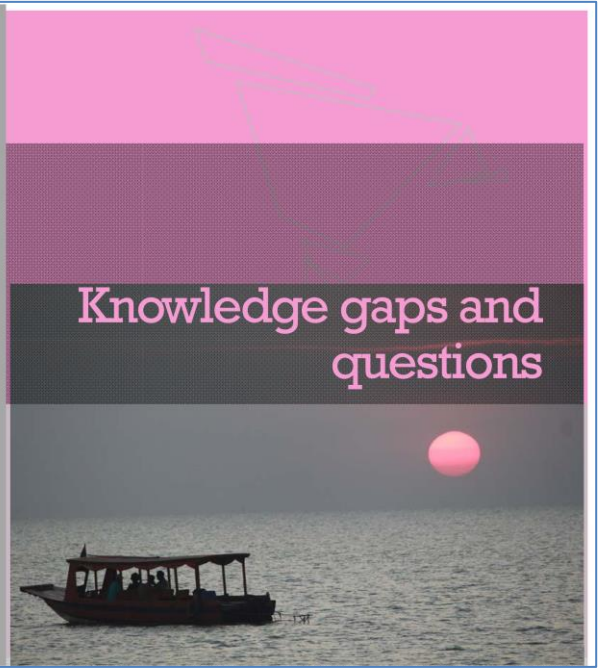
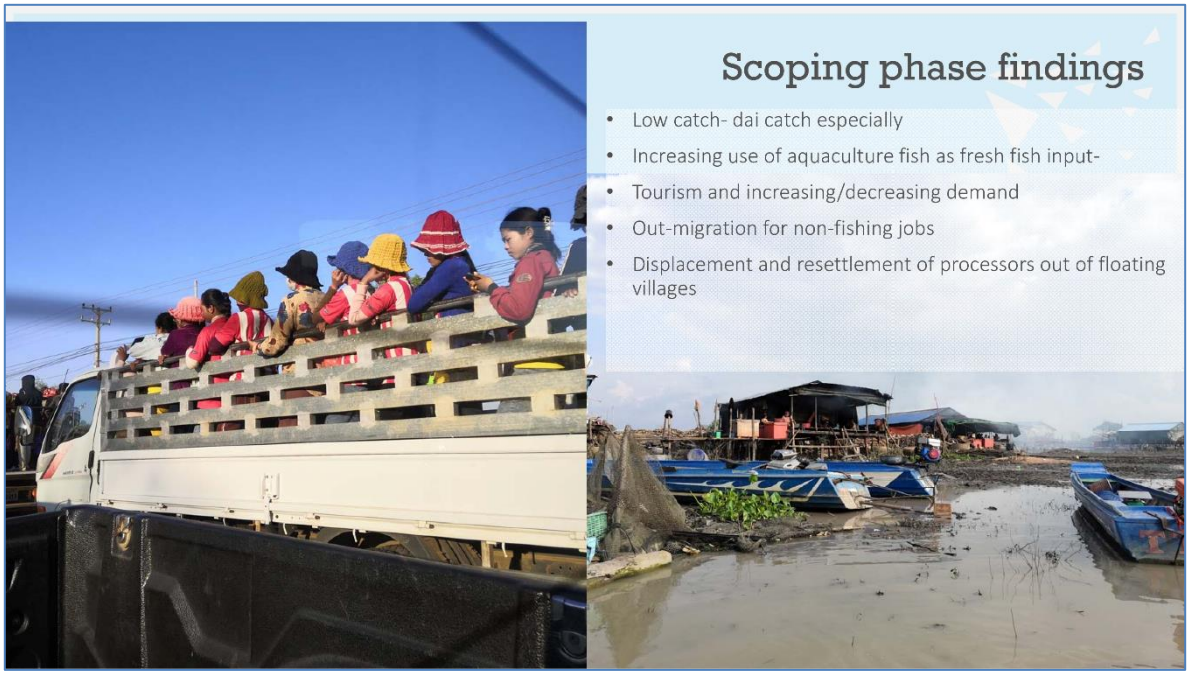
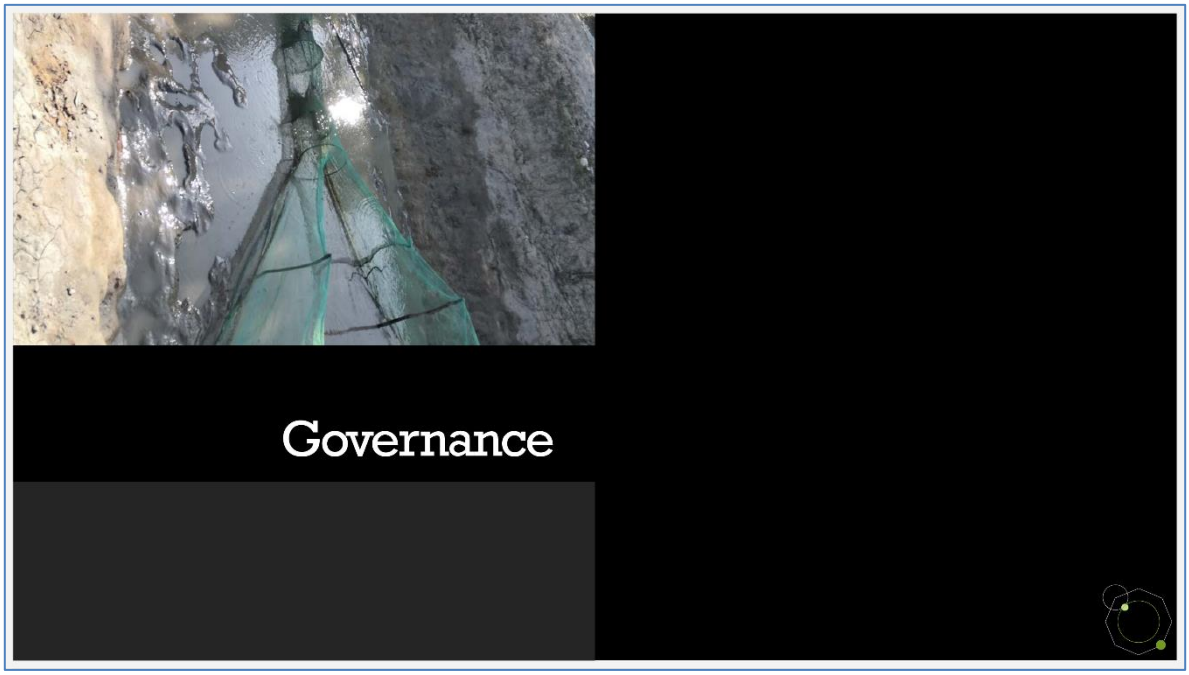
- Decrease in certain types of fish, and catch per unit and impact on nutrition and food security provided by processed fish
- The role of aquaculture
- Climate change and impacts on processed fish livelihoods, food security
- Role of tourism




Scoping phase findings
• Low catch- dai catch especially
• Increasing use of aquaculture fish as fresh fish input-
• Tourism and increasing/decreasing demand
• Out-migration for non-fishing jobs
• Displacement and resettlement of processors out of floating villages

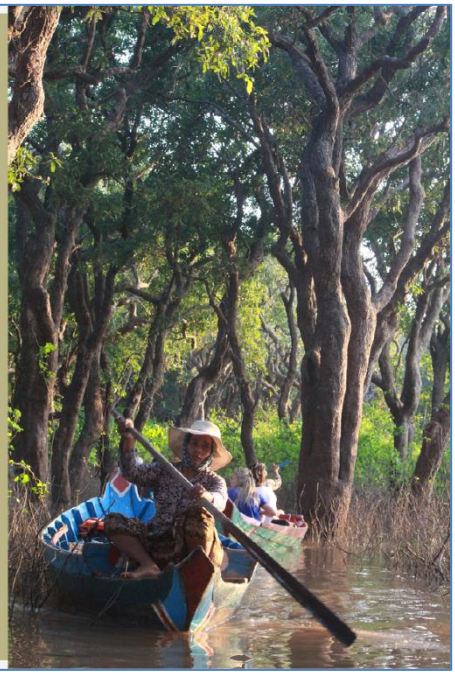

Governance

From published studies

- Community fisheries, co-management of fisheries in general, but not on processed products
- Policy that focuses on quality and institutional structures for processing planned and implemented, but sustainability maybe a concern
  - Cambodian Standard for Prahoc

Knowledge gaps and questions

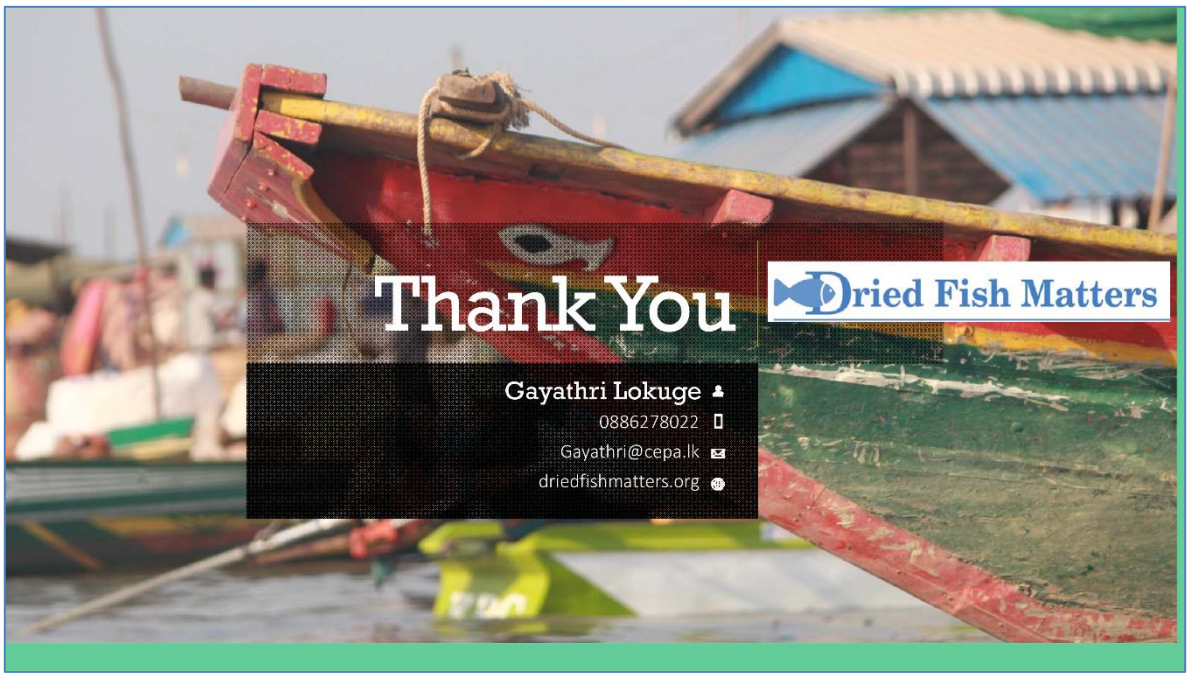
- Inter-development sector coordination and synergies towards policy coherence
- Role of community fisheries in processing
- Women's voices be better included in policy, governance and practice
- Minimum learning of experience from Development projects that target fish processing



Scoping phase findings

- Relative absence of collectives/producer groups
- Minimum interaction with government
- 'One Village One Product' programme
- Market fee, rent and market management
- Lack of mechanisms for conflict resolution and mediation within markets
- Informal nature of 'contracts'
- Lack of formal insurance

Your Logo or Name Here 24


Thank You
Dried Fish Matters
Gayathri Lokuge
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Gayathri@cepa.lk
driedfishmatters.org

Annex IV. World Café notes

Economy – Value chain related:

- How to improve product quality
- Distribution of benefits across value chain
- Broad questions about how value chain works; how to upgrade value of value chain
- Lack of access to credit, capital, transportation, etc.

Food Culture and nutrition

- Need for more cultural awareness of nutritional value among processors
- Putting nutrition fact sheets on packaging
- Lots on food safety; why don't we see any insects in markets
- Need to disseminate product standards; processors don't know this information
- Need for quality control; self control; internal with community; government
- Is there nutrition loss in processing?
- Findings ways to smooth market variations

Net Vibol – Sustainable Development group

Small fish

- Develop strategies for caring for small fish because they are vulnerable to be killed

One village one product

- Certification of products from given place
- Includes fish products
- Initially quite successful but recently has not worked as well

App store data collection

- Online data storage to share data between different users

Extinct fish

- Try to conserve almost extinct fish

Floating forest and fish refuge conservation – protecting aquatic habitat

- To protect breeding grounds of fish
- Mangrove conservation also

- Came from gov’t department

Sea fish processing

- How to use marine fish that otherwise would be trash

Law enforcement

- To support environmental health

Product quality standardization

- Create high, standard product quality
- Using GI models for sustainable aspect

Concern that household production will decline

- Ongoing decline in processed dried fish; maybe in future-Yumiko

Rehabilitation after damage from dams

- Digging out
- Can be the basis for more fish production

Reforestation to prevent erosion and for climate change mitigation

Reduce chemical use in agriculture to avoid pollution in water bodies

Raise more fish through aquaculture

- Particularly release female brood stock

One commune one product

- Bigger than village scale because village may not be sufficient size for GI

Marketing challenges

- Try to find more markets
- Reduce imports as they drive price down

Can fish feed be harmful to human health

- Needs more research

Training on dried fish processing and fish raising

- To increase knowledge about reducing negative ecological impacts

Control burning of forests

Encourage collaboration between government agencies and stakeholders

- On processing, raising fish, and other relevant activities like what to promote
- Facilitate warmer relations

Improve collaboration between buyers and sellers

- To get better understanding of each other and to facilitate communication

Strengthen laws on land use planning and management

- Reduce impacts of tourism on forests and reservoirs

Support material and human resources for conservation activity

- Came from community member

Governance

- Gender balance in community fisheries
- Creating collectives in processing
- Strengthening community fisheries in general
- How to balance increase in fish processing with conservation
- How does displacement of people on lake affect the sustainable livelihoods of those populations

Annex V. Future directions

Group 1: Value chains

Resources

- Fish resources, capital and capacity
    - Fish resources: Fish catch is decreasing
    - Capital: Most processors are from the farming family, not the medium scale, they lack the capital to produce high quality processed fish
    - Capacity: Lacking techniques how to process according to quality standards
- Production cost is higher than the those who use chemical substance, those who don't use those substances can't complete in the market with those who use chemicals
- Techniques
    - Most processors produce dry fish using traditional methods, therefore costly
    - Production is reduced to 25% and upscale producers experience a decrease (conversion from fresh fish to dried) of only 10-15%
- Need for a brand name
- Lack of collective prices, different processors offer different prices
- Consumer certification, don't know what kinds of products the consumer needs and what kind of products will they be satisfied with
- Imported products from outside, the cost of production of these imported products are lower, so we don't consume outside products
- Our processors lack access to financial capital to scale-up or increase their production

Solutions

- Value chain cluster approach- collect them all together, in these clusters
- Processors need training on hygiene production, storage and trade upto standards
- Consumers don't think about the quality but only the price, to raise the awareness on quality products of consumers, make them realise the value of organic or natural products
- Building a brand name, including a logo and trade mark and register them officially in the Ministry and link them to other agriculture and marketing networks

Research questions

- How to add value to the present production?
- How to work effectively in production and marketing group? How to increase the efficiency of production and trading?
- What kinds of products could satisfy consumers? Processors could think of what kinds of products that appeal to consumers and what kinds of steps can be taken to increase the demand for these products?
- How to do branding and raise awareness of high quality of community production? Need to identity how to brand according to the requirements of the consumers?
- How to make quality production of processing methods with less waste?
- How to decrease production cost?
- How to create and disseminate production and quality standards? Book of standards or a manual standard and marketing for processed products to be shared across the country
- How to do collective sourcing and marketing?

Group 2: Collaborations -between government, NGO, CF etc.

Strategies

- They can understand each other well, all stakeholders, bottom level to the upper level
- Communication mechanisms and systems
- All stakeholders will develop annual strategic planning to move towards a specific goal
- Strengthen the collaborations with the existing partners and look for more collaborators locally and in other places to work with
- Build knowledge and capacity of the partnership of all the stakeholders
- We will try to monitor and evaluate, understand weaknesses and strenghs and try to improve our work

Barriers

- Lack of information among the stakeholders for good communication
- Human resource and lack of financial resources. People needed to carry out the duties that are assigned to them

- Discrimination: commujity works with government staff or high level senior or higher educated people, sometimes they expect the ideas/knowledge of the farmers. Then it becomes difficult to work with them
- Lack of trust among the stakeholders. Community level hides the money that had been allocated for the community by the higher authorities
- Who should we approach to discuss our problems? Relevant provincial department, they can give direct/honest support to them

Recommendations/solutions

- Create websites and social media on the phone
- Provide training on law, regulations, human rights so that all the people at the community know about this and therefore they can discuss their problems with the officials better
- Provide some training on business management, explore the potential of establishing private-public partnerships
- Inspire all stakeholders to work with us and increase better management practices so that stakeholders are encouraged to work together
- Transparency with all the stakeholders- between processors and other stakeholders
- Creating a communication mechanism

What does the project can do to increase collaboration between all stakeholders?

- Create a website, social media
- Provide trainings on human rights, business plan
- To learn from the main trainer-strengthened communication mechanism

Group 3: Adaptation

- Search for market demand- try to understand what kind of products that the buyers want
- Quality of product- collective production- what are the past or other experiences from collective production groups?
- Need a specialist to create a group for production
- What are the diversified income generating activities? What are the adaptation mechanisms?
- In order to increase efficiency, work in groups, we have more ideas, and we can be successful

- When we have a group, we are not price takers, we can set our own prices
- How is climate change experienced by communities around the Tonle Sap and Mekong? To face climate change, people migrate to other places to improve their incomes, however, there are social problems created because of this, family break-ups, men bring diseases like HIV when they return from such migration, children to not have proper education because they keep changing their home. When the husband goes away, he will have another woman and the wife will have another man.
- How to enforce laws against illegal fishing?
- What is the potential of making artificial ponds, and culture fish for drying?