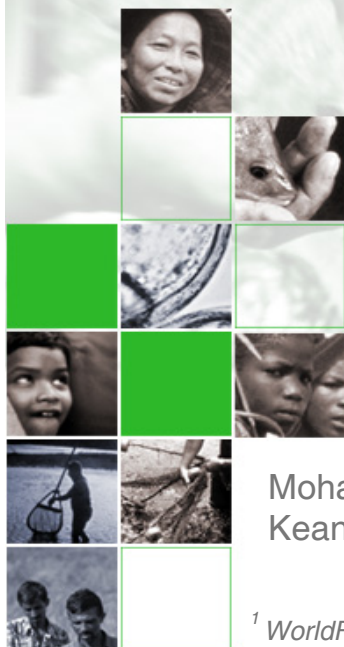


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Marketing Infrastructure, Distribution Channels and Trade Pattern of Inland Fisheries Resources in Cambodia: An Exploratory Study

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Objectives

- To identify major stakeholders and beneficiaries of fish marketing and trade;
- To explore existing marketing and trade infrastructures for policy suggestions for development;
- To identify important species for exports and domestic consumption and assess the importance of fish marketing and international trade in the economy;
- To identify important supply chain and export market routes
- To explore the existing conditions of fish handling and means of transportation for policy suggestions and development;

Data Collection Methods

Data were collected twice to cover open and close season

- Selected three provinces such as Kendal, Kompung Chnang and Siem Reap, and the Phnom Penh city to cover key fishing grounds and landing sites
- Selected three villages – fishing, fishing cum farming and farming cum fishing from each province. Again, a total of 45 households from each village were selected following stratified random sampling procedure.

Data Collection Methods (continued)

Closed season data collection:

- Observed 11 markets, interviewed 61 retailers of fresh and processed fish during first round data collection.
- Observed and monitored 6 landing sites and interviewed, fish collectors, middlemen and agents.
- Interviewed fresh and live-fish exporters and provincial fisheries officials.

Data Collection Methods (continued)

Open season data collection

- Selected 19 retail fish markets for observation and monitoring
- Six landing sites were observed and monitored during second round data collection.
- Interviewed as many as 15 exporters of fresh fish to the neighboring countries.

Key Results: Stakeholders

Fishing dependent:

- Fishers, fish farmers (cage/ponds), indigenous collectors, whole sellers/middlemen, traders, retailers, exporters, processors, commercial concessionaries (lot owners), landing site owners/concessionaries, motto drivers, transporters

Institutional and illegal:

- Fisheries officials, police, economic police, military police, customs officials, toll collectors (on road)

Key Results: Observation of landing sites, retail markets and fish processing units

- Only landing sites around city have structure although fish handling, sorting, unpacking and repacking are done in traditional way.
- There are no structures in the landing sites in Provinces. Loading and unloading, sorting, heading, unpacking and repacking are done on the edge (beach) of the river.
- Most of the white fish are landed in bamboo made packages without icing that causes degradation of quality.
- Retailers and whole sellers carry these fish in same conditions that causes further degradation of quality.

Key Results: Observation of landing sites, retail markets and fish processing units

- Means of transportation from the landing sites and from the export houses are moto for the small traders, non-insulated mini-trucks and big trucks that are vulnerable to quality degradation and weight loss.
- Export houses collect fish through fish collectors in different provinces who carry fish products in moto or small vehicles in plastic bags with icing.
- Collectors bring days' or one week's collection to the export houses. The process of storing and transportation is vulnerable to degrading quality.

**Key Results: Observation of landing sites,
retail markets and fish processing units**

- Once they bring products to the export houses they unpack, sort and weight and the exporters put these in small plastic bags into iced containers for days or week until they are able to accumulate sufficient quantity for a truck load.
- Again, once these arrive to the export points they have to unpack and resort. This is most inefficient way of handling.
- Middle scale fish processing units hardly maintain health and safety standards
- The entire process is not environmentally safe

**Key Results:
Marketing of fish by the households**

Buyers	Households (%)
Fish collectors	45.25
Landing sites	41.77
Fish processors	0.63
Cage/crocodile farmers	9.49
Other	2.84

Source: Household survey (2004)

Key Results:

Sources of fish in the retail markets

Sources	Quantity (kg)
<i>Phnom Penh markets</i>	
Boeung Cheaung Ek	538
Chak Tomuk, Saang	302
Chbar Ampov landing site	2690
Kampong Chnang	740
Kandal, Prey Veng, Kampong Chnang, Kampong Cham	941
Kean Svay	1529
<i>Phnom Penh landing sites</i>	
Lvea Em	597
Prek Pnaov landing site	3173
Saang, Prek Ho, Lvea Em	486
Other	5717
Total	16893

Key Results:

Sources of fish in the retail markets

Sources	Quantity (kg)
<i>Kampong Chnang markets</i>	
Boeung Thom Kang Meas	30
Chnok Tru landing site	2030
Chong Thnal landing site	2876
Ponley, Seh Slab	54
Total	5026
<i>Siem Reap markets</i>	
Chong Khneas	358
Deum Run	1215
Kampong Khlaing	505
Siem Reap	1112
Battambang	2197
Total	5382

Key Results:

Sources of fish in the retail markets

Sources	Quantity (kg)
<i>Kandal markets</i>	
Basac river	65
Boeung Cheaung Ek	30
Chbar Ampour landing	1690
Koh Thom	451
Leuk Dek	909
Saang	128
Total	3647

Key Results: Number of species and average price by retail market in open season

Location of markets	# of species	Average price (\$)
Phnomp Penh	398	1.24
Kampong Chnang	138	0.61
Kandal	90	0.92
Siem Reap	91	0.53
Average price (\$)		0.99

**Key Results: Important species in volume
in the retail markets (open season 2004)**

Species	Quantity	Price(4)	Share (%)
Trey raws	7733	1.11	24.92
Trey chhdaur	4074	1.22	13.13
Trey kranh srai	1300	0.78	4.19
Trey chrakaing	1283	1.01	4.13
Trey chhpin	1281	1.01	4.13
Trey riel	1114	0.53	3.59
Trey chhlaing	976	0.96	3.14
Trey chhkok	890	1.51	2.87
Trey pra	782	0.87	2.55
Trey andaingtoum	782	1.01	2.52
Top ten species	20221	1.01	65.17
All	31037	1.84	100.00

**Key Results: Important species in value
in the retail markets (open season 2004)**

Species	Quantity	Price(4)	Share (%)
Bankang		98.0	7.81
Trey khya	1.5	2.50	0.01
Trey klaing hay	96.5	2.21	0.31
Trey pra, banglao	6.5	2.00	0.02
Trey krum	769.2	1.78	2.48
Trey sanday	128.0	1.76	0.41
Trey pawa muk py	1.5	1.75	0.01
Trey kray	26.5	1.71	0.01
Trey kbork	2.0	1.69	0.01
Trey chhlonh chhnoht	421.9	1.63	1.36
Top ten in terms of value	1551	2.48	5.02
All	31037	1.84	100

**Key Results: Important species in volume
in the selected landing sites (open season 2004)**

Species	Quantity	Price(\$)	Share (%)
Trey kanchak sla	7208	3.52	18.94
Trey chhdaur	4375	2.91	11.50
Trey chhkok	4042	3.11	10.62
Trey carp	2085	0.80	5.48
Trey kaok	2014	1.76	5.29
Trey po	1677	2.42	4.41
Trey kaok	1437	2.26	3.78
Trey krum	1350	2.83	3.55
Trey chrakaing	1199	2.29	3.15
Trey kantrang preng	1178	1.54	3.10
Top ten	26565	2.34	69.82
All species	38050	2.16	100.00

**Key Results: Important species in value
in the selected landing sites (open season 2004)**

Species	Quantity	Price(\$)	Share (%)
Trey kbork	11	5.80	0.03
Trey kromorm	72	5.00	0.19
Trey kanchos thmor	72	4.84	0.19
Trey kchoeung	22	4.76	0.06
Trey klaing hay	158	4.39	0.42
Trey kanh chorn chay	109	4.30	0.29
Trey kanchak sla	7208	3.52	18.94
Trey sanday	203	3.52	0.53
Trey tilapia	33	3.33	0.09
Trey damrey	454	3.24	1.19
Trey chhkok	4042	3.11	10.62
Top ten	12384	4.58	32.55
All species	38050	2.16	100.00

**Key Results: Important species for export
in volume (open season 2004)**

Species	Share (%)	Export price (\$)	
		<i>Buying</i>	<i>Selling (\$)</i>
Trey changwa poht	26.72	0.70	1.00
Trey kray	20.34	3.50	3.83
Trey raws	17.68	2.85	3.34
Trey chhdaur	7.50	3.30	3.53
Trey chhlonh chhnoht	3.82	2.66	3.17
Trey chhlaing	3.40	2.08	2.65
Trey kes	3.05	7.04	7.92
Trey slat	2.74	3.49	4.08
Trey sanday	2.75	4.97	5.72
Trey kanchrouk	2.00	1.50	2.50
Top ten together	90.00	3.21	3.78
All species	100.00	4.26	5.28

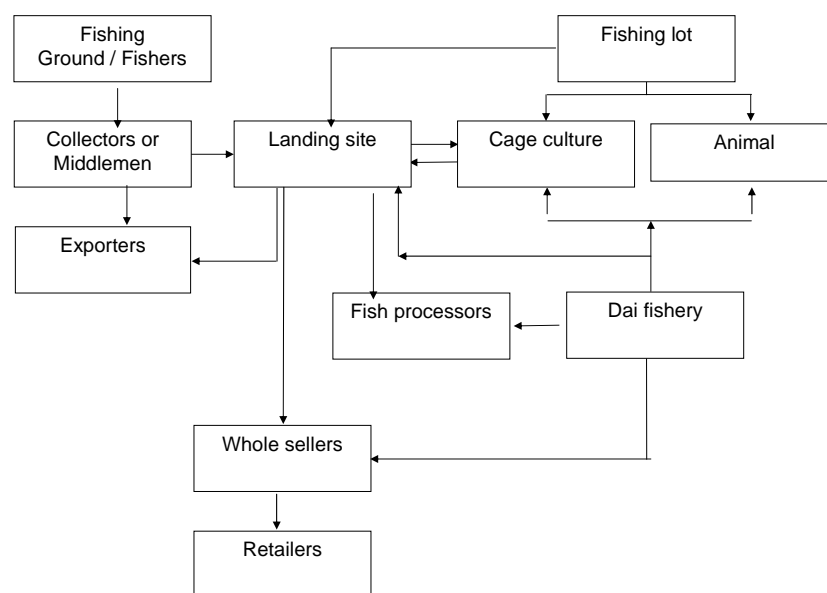
**Key Results: Important species for export
in value (open season 2004)**

Species	Share (%)	Export price (\$)	
		<i>Buying</i>	<i>Selling</i>
Trey damrey (live)	0.76	22.34	34.95
Trey damrey (dead)	0.14	8.00	23.20
Trey promah	0.30	11.33	12.72
Trey khya	0.18	9.41	10.26
Trey kes	3.05	7.04	7.92
Trey kchoeung	0.43	5.69	6.55
Trey sanday	2.73	4.97	5.72
Trey ta aun	0.03	4.50	5.30
Trey ruschek	1.74	4.25	5.25
Trey tanel	0.13	4.00	5.00
Top ten together	9.49	8.14	11.69
All species	100.00	4.26	5.28

Key Results: Average price (USD) per kg of fresh fish at different levels (open season 2004)

Price received by the fishers	0.39
Price paid by the households	0.60
Retail market price	1.84
Landing site price 2.16	
Export house price	4.26
Border price	5.28

Key Results: Fish Supply Chain



Key Results: Markets and routes for fresh fish exports

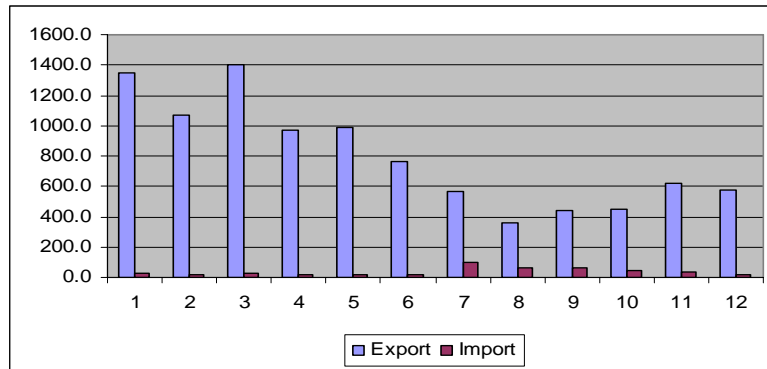
- Thailand: Mainly by road through official export points such as Poippet, Odtar Meanchey, Stoeung Treng (Lao/Cambodia to Thailand).
- There are some unofficial routes such as Pailin, Tapaya in Sakeaw province of Thailand and may be some other points.
- Important species as per monitoring done by Thailand in Langkawe market are *Wallago attu*, Snails, *Pangasianodon sp.*, *Notopterus sp.*, *Monopterus albus*, *Micronema bleeckeri*, *Micronema apogon*, *Mastacembelus sp.*, *Macrobracium sp.*, *Hemibagrus wyckioides*, *Hemibagrus nemurus*, *Coius undecemradiatus*, *Chitala ornata*, *Channa Striata*, *Boesemania microlepis*, *Acanthopsis sp.*

Key Results: Markets and routes for fresh fish exports

- **Vietnam:** Mainly through river transport. Transactions are done unofficially through several border points. Mainly bronze feather back and fish feed are exported. Almost thirty percent of small exporters' volume of total exports go to Vietnam. In addition, fish feed are exported by indigenous traders.
- **Hong Kong and China:** Mainly live sand goby by air. Some ornamental fish.
- **Australia, Japan and USA:** Mainly seafood. Cannot export to EU due to non-compliance with health safety measures.
- **Potential markets for fresh fish:** South Asia – mainly Bangladesh. High demand for white fish.

Key Results: Volume of export and import through Poipet in the year 2003 and fluctuation

Total export 10 thousand tons, total imports 4 hundred tons



Source: Data collected by Ubolratana Suntornratana, Fisheries Biologist, Udonthani inland Fisheries Development Centre, Fisheries Resource and Conservation Division, DOF, Thailand

Thank you