Programme for Sustainable and Inclusive Growth in the Fisheries Sector: Capture Component (CAPFISH-Capture)

Catch Monitoring Assessment Survey of Marine Fisheries Production at Landing Sites in Cambodia

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MONTHLY STATISTICAL REPORT OF MARINE FISHERIES PRODUCTION IN SEPTEMBER 2022

Prepared: Marine Fisheries Research and Development Institute (MaFReDI)

1. Introduction and methodology

MaFReDI, with technical assistance from FAO CAPFISH project under EU budget support, is currently piloting scientific catch monitoring at marine landing sites in the four coastal provinces in Cambodia. The aim is to obtain better information on catch and effort by marine fisheries in Cambodia, and to develop a sustainable catch monitoring methodology for implementation by provincial fisheries administrations, supported by MaFReDI. Coverage of landing sites and fishery sectors is gradually expanded, since the start of catch monitoring in July 2021. The current statistical report, provides preliminary analysis based on sample data and focuses on the main indicators that are covered by the catch monitoring sample survey. Therefore, the results do not represent final estimates and may be changed in future updates.

A description of the methodology can be found in:
Fisheries Administration (FiA). 2021. Manual for Fish Catch Monitoring Assessment for Marine Fisheries in Cambodia. Marine Fisheries Research and Development Institute of the Fisheries Administration, Phnom Penh, Cambodia. 38 pages.

Data collection for September 2022 was conducted at 8 fish landing sites in all coastal provinces.

Table 1. Number of random selected landings recorded by vessel class and landing site.

Province	Landing sites	Small Scale	Middle Scale
Koh Kong	Oknha Lyon Phat	5	23
Koh Kong	Thmasar	14	16
Preah Sihanouk	Stueng Hav	1	27
Preah Sihanouk	Tumnup Rolok	5	28
Kampot	Kampong Kandal		27
Kampot	Trapeang Ropov	9	10
Kep	Ampeng	5	21
Kep	Oukrasa	8	19
Grand Total		**47**	**171**

Middle-scale vessels includes vessel length 12-24 and all trawlers regardless of size, as well as all vessels operating blood cockle dragnet.

2. Statistical tables and results

2.1. Reported catch by gear

Table 2. Mean reported catch in sampled landings (kg) for September 2022.

Province	Landing site	Gear	Small Scale		Middle Scale	
			Mean	ε%	Mean	ε%
Kep	Ampeng	Centipede trap	24.4	8.5%	33.7	8.9%
Kep	Oukrasar	Centipede trap			31.0	26.8%
Koh Kong	Thmasar	Centipede trap	21.5	25.6%		
Kep	Oukrasar	Crab gillnet	28.5	29.8%	23.3	14.7%
Koh Kong	Thmasar	Crab gillnet	6.0	35.4%	6.8	19.4%
Preah Sihanouk	Stueng Hav	Crab gillnet			192.5	7.5%
Preah Sihanouk	Tumnup Rolok	Crab gillnet			232.9	3.8%
Kampot	Trapeang Ropov	Crab trap			21.9	5.5%
Kampot	Trapeang Ropov	Fish gillnet	48.0	11.8%	42.0	42.9%

Province	Landing site	Gear	Small Scale		Middle Scale	
			Mean	ε%	Mean	ε%
Kep	Oukrasar	Fish gillnet	23.6	33.1%		
Preah Sihanouk	Tumnup Rolok	Fish gillnet			465.6	2.2%
Koh Kong	Oknha Lyon Phat	Fish trap			980.0	2.0%
Kampot	Trapeang Ropov	Indian Threadfin Gillnet	9.0	6.4%		
Kampot	Kampong Kandal	Mackerel Gillnet			1,116.7	20.7%
Kampot	Trapeang Ropov	Mackerel Gillnet	52.3	42.5%		
Koh Kong	Oknha Lyon Phat	Mackerel Gillnet	45.0	6.4%	53.2	11.3%
Kep	Oukrasar	Octopus trap longline			110.0	36.4%
Koh Kong	Oknha Lyon Phat	Octopus trap longline			275.0	27.3%
Preah Sihanouk	Stueng Hav	Octopus trap longline			262.5	77.1%
Kampot	Trapeang Ropov	Others	87.5	43.5%		
Koh Kong	Thmasar	Others			440.0	9.1%
Koh Kong	Thmasar	Push net	40.3	32.0%		
Koh Kong	Oknha Lyon Phat	Shrimp gillnet			690.0	30.4%
Kampot	Kampong Kandal	Trawl[1]	31.9	11.6%	32.4	18.2%
Kep	Ampeng	Trawl			97.4	44.3%
Koh Kong	Oknha Lyon Phat	Trawl	370.0	35.1%	3,460.0	80.3%
Preah Sihanouk	Stueng Hav	Trawl			1,930.6	23.5%
Preah Sihanouk	Tumnup Rolok	Trawl	73.2	26.8%	129.1	12.0%

ε% is the relative standard error, if higher than 30%, values are not statistically accurate and cannot be used; average catch without ε% are based on a single observation, are not representative for that gear and are not included in the table.

Table 3. Proportion of landings recorded for all gears by province, with contribution to recorded catch (kg).

Gear	Koh Kong	Preah Sihanouk	Kampot		Kep	Total kg	%Total
Trawl	22.6%	73.3%	1.5%		2.6%	49,466.1	69.8%
Mackerel Gillnet	15.9%		84.1%			4,191.0	5.9%
Fish gillnet	0.1%	87.3%	10.0%		2.7%	3,734.5	5.3%
Crab gillnet	3.7%	82.5%			13.8%	2,441.8	3.4%
Fish trap	90.7%		9.3%			2,161.0	3.0%
Halfbeak gillnet			100.0%			2,000.0	2.8%
Octopus trap longline	53.3%	32.9%			13.8%	1,595.0	2.3%
Others	68.9%		28.5%		2.6%	1,510.0	2.1%
Shrimp gillnet	97.1%	2.9%				1,420.8	2.0%
Spanish mackerel gillnet		100.0%				900.0	1.3%
Centipede trap	9.6%				90.4%	543.0	0.8%
Crab trap	2.2%	14.4%	55.2%		28.2%	277.0	0.4%
Shrimp gillnet 1 & Trawl	100.0%					200.0	0.3%
Push net	100.0%					193.0	0.3%
Shrimp gillnet 3 & Crab gillnet		100.0%				78.0	0.1%
Crab gillnet 6 & Shrimp gillnet		100.0%				60.0	0.1%

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[1] originally classified as 'beach seines', this was corrected during 2022, recording this gear as 'Trawl'

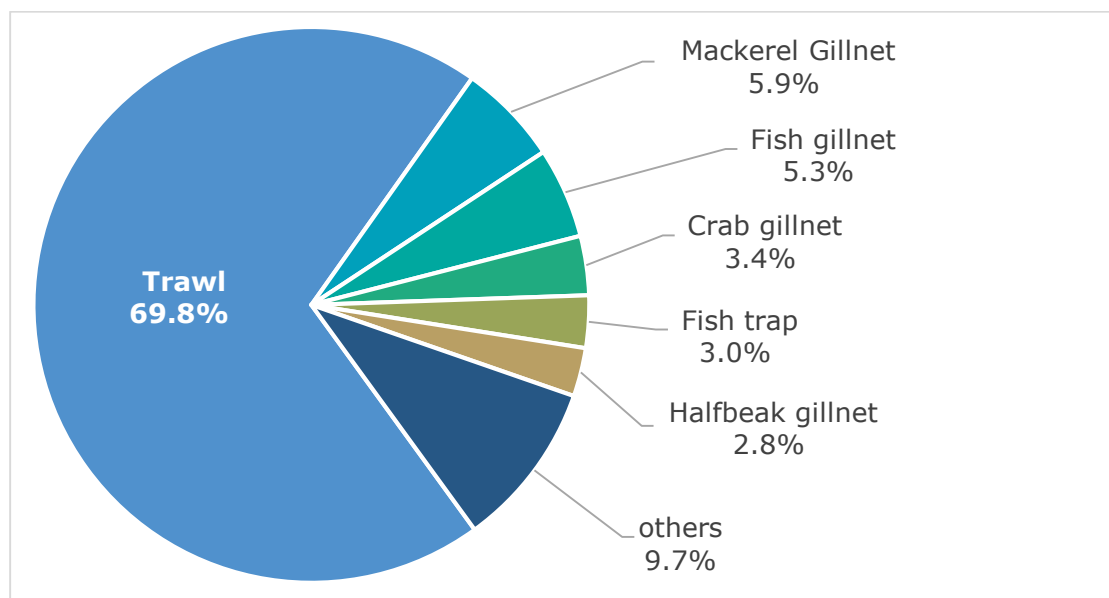| Gear	Koh Kong	Preah Sihanouk	Kampot		Kep	Total kg	%Total
Mullet gillnet	100.0%					30.0	0.04%
Indian Threadfin Gillnet			100.0%			27.0	0.04%
Trap			100.0%			12.0	0.02%
Mantis shrimp gillnet	100.0%					7.0	0.01%
Ray bottom longline					100.0%	6.0	0.01%
Grand Total	24.9%	61.0%	10.5%		3.6%		

Figure 1.   Contribution of main gear types to reported catch.
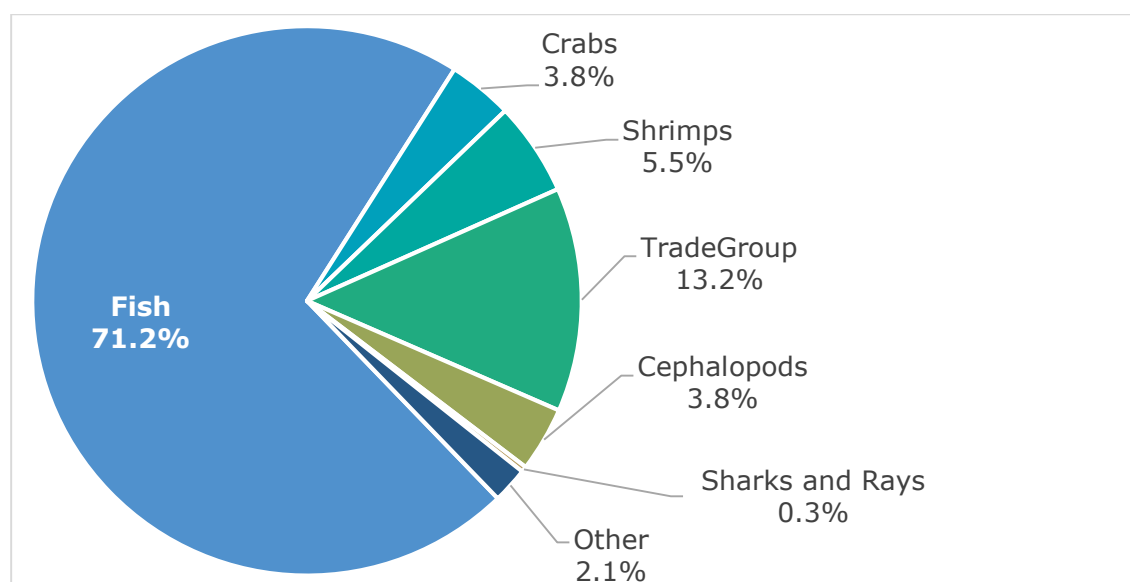
2.2. Catch and value by species

Figure 2.   Contribution of main aquatic animal groups to reported catch (total reported weight: 38,173 kg).

Table 4. Top 20 reported species and species groups **by weight** (kg)

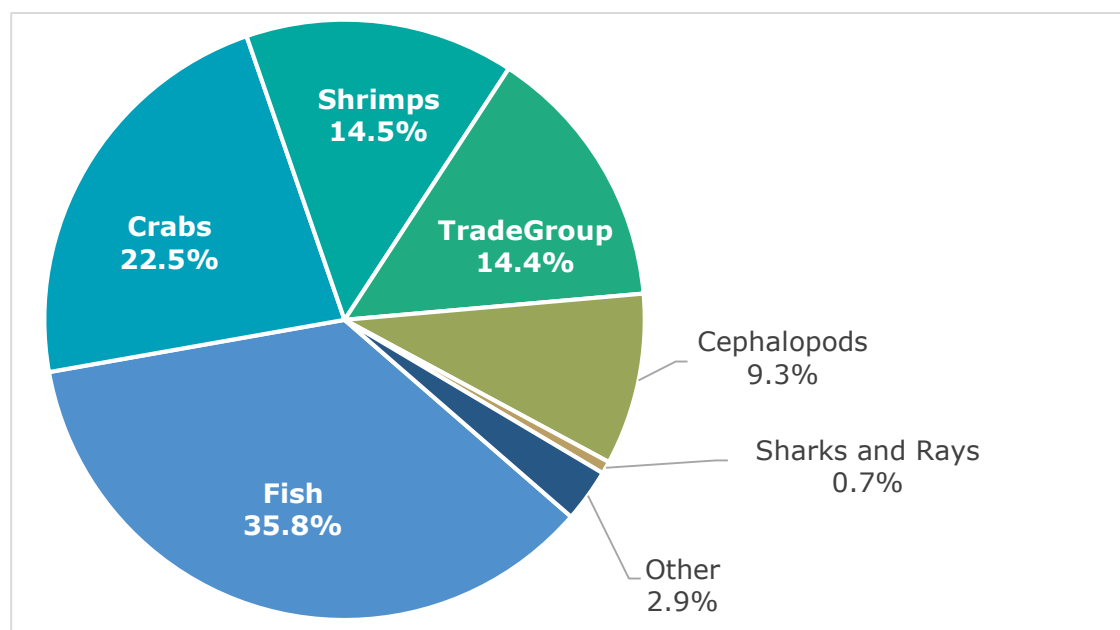| Scientific name	English Common	Catch (kg)	Catch% %Total	Catch% %Cum.[2]
	Other fish nei	5,328	14.0%	14.0%
	Mixed fish (human consumption)	3,000	7.9%	21.8%
	Cephalopods (squids/cuttlefish)	2,757	7.2%	29.0%
Portunus pelagicus	Swimming crab	2,477	6.5%	35.5%
Decapterus macrosoma	Shortfin scad	2,192	5.7%	41.3%
	Crabs (swimming crab, mud crab)	2,112	5.5%	46.8%
Metapenaeus spp.		2,093	5.5%	52.3%
	Needlefish nei	2,000	5.2%	57.5%
Rastrelliger brachysoma	Short mackerel	1,490	3.9%	61.4%
	Other catch nei	1,427	3.7%	65.2%
	Octopus	1,410	3.7%	68.9%
	trash fish	1,300	3.4%	72.3%
Penaeus sp.	Prawns nei	1,154	3.0%	75.3%
	Mixed species (in boat)	1,000	2.6%	77.9%
Anodontostoma chacunda	Chacunda gizzard shad	933	2.4%	80.4%
Sarda orientalis	Striped bonito	900	2.4%	82.7%
Scomberoides commersonianus	Talang queenfish	658	1.7%	84.4%
Rastrelliger faughni	Island mackerel	650	1.7%	86.1%
	Mollusks nei	550	1.4%	87.6%
Other species		4,742	12.4%	100.0%
Total reported catch		**38,173**		

Figure 3. Proportion of total reported value (1000 Riel), by main aquatic animal group (Total reported value: 343,646,000 Riel).

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[2] This represents the cumulative proportion, as a measure for the resource dependency/diversity of the fishery.

Table 5.   Top 20 reported species by value (1000 Riel) and average price/kg.

Scientific name	English Common	Value (1000 Riel)	%Value	%Cum	Price (Riels/Kg)
Portunus pelagicus	Swimming crab	87,880	25.57%	25.57%	28,000
	Cephalopods (squids/cuttlefish)	39,288	11.43%	37.01%	14,000
Metapenaeus spp.		32,245	9.38%	46.39%	21,000
	Other fish nei	25,550	7.44%	53.82%	4,000
	Octopus	15,379	4.48%	58.30%	12,000
Decapterus macrosoma	Shortfin scad	14,850	4.32%	62.62%	7,000
Penaeus sp.	Prawns nei	13,338	3.88%	66.50%	18,000
Rastrelliger brachysoma	Short mackerel	11,238	3.27%	69.77%	8,000
	Squids nei	10,190	2.97%	72.74%	24,000
	Needlefish nei	7,000	2.04%	74.77%	4,000
	Mixed species (boat)	6,800	1.98%	76.75%	6,000
	Other catch nei	6,588	1.92%	78.67%	-
	Mixed fish (consumption)	6,000	1.75%	80.42%	2,000
	Shrimps (mixed species)	5,980	1.74%	82.16%	13,000
Suborder Sepiina	Cuttlefish	5,339	1.55%	83.71%	15,000
	Other species nei	5,328	1.55%	85.26%	98,000
Scomberoides commersonianus	Talang queenfish	4,935	1.44%	86.70%	8,000
Decapterus maruadsi	Round scad	4,779	1.39%	88.09%	9,000
Rastrelliger faughni	Island mackerel	3,900	1.13%	89.22%	6,000
Other species		37,039	10.78%	100.00%	
Total reported value		**343,646**			

Not all prices are reported by category, some market (commercial) price categories are included separately.

Annex 1. Species catch by province for September 2022 (total reported catch: 38,173 kg)

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	%Total
	Other fish nei	ប្រភេទត្រីចំរុះ	994.0	498.0	2960.0	876.0	5,328	13.96%
	Mixed fish for (human) consumption	ប្រភេទសម្រាប់ហូប			3000.0		3,000	7.86%
	Cephalopods (squids/cuttlefish)	ពពួកមឹកស្ទុកនិងមឹកបំពង់		254.0	2460.0	43.0	2,757	7.22%
Portunus pelagicus	Swimming crab	ក្តាមសេះ	235.9	538.5	200.6	1502.0	2,477	6.49%
Decapterus macrosoma	Shortfin scad	ត្រីកាម៉ុងឬត្រីប្ញាធូ	502.0			1690.0	2,192	5.74%
	Crabs (swimming crab, mud crab)	ពពួកក្តាម (រួមទាំងក្តាមសេះ ក្តាមថ្ម ក្តាមជ័រ ជាដើម)	8.0	94.0	2010.0		2,112	5.53%
Metapenaeus spp.		បង្គាឌឹខាក់	6.0	10.0	2040.0	37.0	2,093	5.48%
	Needlefish nei	ត្រីផ្ទោង	2000.0				2,000	5.24%
Rastrelliger brachysoma	Short mackerel	ត្រីផ្លាធូ ឬត្រីកាម៉ុងខ្លួនខ្លី	1100.0		390.0		1,490	3.90%
	Other catch nei	ផ្សេងៗ	1402.6	4.0		20.0	1,427	3.74%
	Octopus	មឹកពើងពាង	118.1	263.0	980.0	49.0	1,410	3.69%
	trash fish	ត្រីជី	2.0	347.0	538.0	413.0	1,300	3.41%
Penaeus sp.	Prawns nei	បង្គា	142.0	18.0	638.0	356.0	1,154	3.02%
	Mixed species catch in boat	ផលនេសាទមិនទាន់ញ្ជែក(លាយគ្នា)នៅក្នុងយួបទូក			1000.0		1,000	2.62%
Anodontostoma chacunda	Chacunda gizzard shad	ត្រីកាម៉យ	842.0	91.0			933	2.44%

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	%Total
Sarda orientalis	Striped bonito	ត្រីឈាមស				900.0	900	2.36%
Scomberoides commersonianus	Talang queenfish	ត្រីកាឡ្វាង				658.0	658	1.72%
Rastrelliger faughni	Island mackerel	ត្រីប៉ាឡ្វាង	650.0				650	1.70%
	Mollusks nei	សប្បើសត្ច ពពួកខ្យង គ្រំ ងាវ		69.5	480.0		550	1.44%
Decapterus maruadsi	Round scad	ត្រីកូនគុំ				531.0	531	1.39%
	Shrimps (all kinds of shrimps)	ពពួកបង្គាគ្រប់ប្រភេទទាំងអស់	10.0		460.0		470	1.23%
	Squids nei	មឹក	80.0		275.0	92.0	447	1.17%
Suborder Sepiina	Cuttlefish	មឹកស្ងក	12.0	41.0	320.0	23.0	396	1.04%
Leiognathus equulus	Common ponyfish	ត្រីសំបោរហៀរ "មានរអិល"			340.0		340	0.89%
Siganus canaliculatus	Whitespotted Spinefoot	ត្រីកន្ធាងក្រអូម	30.0		200.0		230	0.60%
Acanthurus sp.	Surgeonfish	ត្រីកាតាំង	200.0		5.0		205	0.54%
Lutjanus argentimaculatus	Mangrove red snapper	ត្រីអាំងកឺយក្រហម			200.0		200	0.52%
Penaeus monodon	Giant tiger prawn	បង្គាខ្លឹង	5.5	184.0			190	0.50%
Rastrelliger kanagurta	Indian mackerel	ត្រីកាម៉ុងខ្លួនវែង			185.0		185	0.48%
	Small mixed shrimp nei	គី		146.0			146	0.38%
Megalaspis cordyla	Torpedo scad	ត្រីកន្ទុយរឹង				102.0	102	0.27%
Epinephelus coioides	Orange-spotted grouper	ត្រីតុកកែកៅ			100.0		100	0.26%
	Sharks	ឆ្លាម				91.0	91	0.24%

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	%Total
Eleutheronema tetradactylum	Fourfinger threadfin	ត្រីកាវ៉ារ	48.0		40.5		89	0.23%
	Mantis shrimp	បង្គងកណ្ដាប	62.3		9.0		71	0.19%
Scomberomorus commerson	Narrowbarred Spanish mackerel	ត្រីបេកាខ្មៅ ឬត្រីបេកាឆ្នូត			70.0		70	0.18%
	Lobster	បង្គងប៉ាក	6.5	2.2	3.3	47.0	59	0.15%
	Crabs nei	ក្ដាមផ្សេងៗ		51.0			51	0.13%
Panna microdon	Panna croaker	ត្រីប្រម៉ា	50.5				51	0.13%
Saurida undosquamis	Bushtooth lizarfish	ត្រីក្តុចិនអុជខ្មៅ		50.0			50	0.13%
Selar crumenophthalmus	Bigeye scad	ត្រីកន្ទុយវែងភ្នែកធំ				45.0	45	0.12%
Chiloscyllium punctatum	Brownbanded bambooshark	ឆ្លាមឆ្នូត		4.0	40.0		44	0.12%
	Barracuda	ត្រីអព្រែង			40.0		40	0.10%
	Rabbitfish	ត្រីកន្ឆ្លាំង	21.0	17.0			38	0.10%
Scomberomorus sp.	Spanish mackerel species nei	ត្រីបេកា	36.0				36	0.09%
Sillago ingenuua	Bay sillago	ត្រីព្រលួសធម្មតា		36.0			36	0.09%
Thunnus tonggol	Longtail Tuna	ត្រីប្រម៉ា			35.0		35	0.09%
	Pony fishes	ត្រីកិ	13.0	1.5	20.0		35	0.09%
	Parrot fish	ត្រីសេក	26.0	4.0			30	0.08%
Thryssa hamiltonii	Hamilton's thryssa	ត្រីស្ទឹកឫស្សី				30.0	30	0.08%
Brevitrygon imbricata	Scaly whipray	បប៉ែលមាន់		5.0		23.0	28	0.07%
Scylla serrata	Mud crab	ក្ដាមថ្ម	0.7		27.0		28	0.07%

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Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	%Total
	Rays nei	បបែល	1.0	19.0		5.0	25	0.07%
	Cephalopods (octopus)	ពពួកមឹកពីងពង	10.0			10.0	20	0.05%
	Mullets	ត្រីក្បក			20.0		20	0.05%
	squirrelfish	ត្រីក្រហម	20.0				20	0.05%
Sillago sihama	Silver sillago	ត្រីព្រល្លស	0.5			19.0	20	0.05%
Pseudorhombus arsius	Largetooth flounder	ត្រីអណ្ដាតផ្ទៃ	1.0		10.0	6.0	17	0.04%
Decapterus russelli	Slender scad	ត្រីកន្ទុយវែង			15.0		15	0.04%
Selaroides leptolepis	Yellow stripe trevally	ត្រីឆ្នូតលឿង			15.0		15	0.04%
	Lizardfish	ត្រីក្តុចិន				12.0	12	0.03%
Chiloscyllium griseum	Grey bambooshark	ឆ្លាមគីង្គក់ប្ធ្លាមឆ្លូត		12.0			12	0.03%
	Shellfish nei	ខ្យង ម៉ឹក ក្ដាមផ្សេងៗ		8.0	2.0		10	0.03%
Sphyraena obtusata	Obtuse barracuda	ត្រីអព្រ្រែ	10.0				10	0.03%
Saurenchelys cancrivora	Slender Sorcerer	ត្រីខ្ទឹងសមុទ្រ		8.5			9	0.02%
Crenimugil seheli	Bluespot mullet	ត្រីក្បក	1.0		7.0		8	0.02%
Episesarma versicolor	Violet vinegar crab	ក្ដាមជ័រ			6.5		7	0.02%
Arius maculatus	Spotted catfish	ត្រីក្តុ			4.0		4	0.01%
Choerodon anchorago	Orangedotted tuskfish	ត្រីសេកទឹកក្រូច		4.0			4	0.01%
	Snappers, jobfishes	ត្រីអាំងកីយ	3.0				3	0.01%
Scarus ghobban	Blue-barred parrotfish	ត្រីសេកស្រការលឿង		3.0			3	0.01%

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	%Total
	Emperors, scavengers nei	ត្រីគ្រាប់ខ្មរ		2.5			3	0.01%
	Herrings	ត្រីក្បៀក			2.0		2	0.01%
	Other catch	ផ្សេងៗទៀត		2.0			2	0.01%
Albula neoguinaica	Sharpjaw bonefish	ត្រីបេកា	2.0				2	0.01%
	Flounders and soles nei	ត្រីអណ្ដាតឆ្កែ	1.0				1	0.00%
Gerres abbreviatus	Deepbody silverbiddy	ត្រីដួរអង្ករ		1.0			1	0.00%
Penaeus merguiensis	Banana shrimp	បង្គាប៉ាវ៉ា		1.0			1	0.00%
Siganus virgatus	Doublebarred spinefoot	ត្រីកន្ថាំងថ្ម		0.5			1	0.00%