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 OCTOBER 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 October 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	14
Preah Sihanouk	Stueng Hav	1	27
Preah Sihanouk	Tumnup Rolok	5	23
Kampot	Kampong Kandal		28
Kampot	Trapeang Ropov	9	19
Kep	Ampeng	5	24
Kep	Oukrasa	8	12
Province	Landing sites	**47**	**170**

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 October 2022.

Province	Landing site	Gear	Small Scale		Middle Scale	
			Mean	ε%	Mean	ε%
Koh Kong	Thmasar	Blood cockle dragnet			5.0	20.00%
Koh Kong	Thmasar	Centipede trap	5.1	70.80%		
Kep	Oukrasa	Crab gillnet			18.3	13.30%
Koh Kong	Thmasar	Crab gillnet	4.8	19.00%	5.1	18.00%
Sihanouk	Tumnup Rolok	Crab gillnet	170.9	17.20%	182.3	11.40%
Kampot	Trapeang Ropov	Crab trap	19.4		21.6	1.10%
Kep	Oukrasa	Crab trap	7.0	42.90%	39.6	19.40%
Kampot	Trapeang Ropov	Fish gillnet	108.1	17.70%	70.0	28.60%

Province	Landing site	Gear	Small Scale		Middle Scale	
			Mean	ε%	Mean	ε%
Kep	Oukrasa	Fish gillnet	22.5	23.10%		
Koh Kong	Thmasar	Fish gillnet			23.5	70.20%
Sihanouk	Tumnup Rolok	Fish gillnet			822	17.50%
Koh Kong	Oknha Lyon Phat	Fish trap			1,125.00	15.60%
Kampot	Kampong Kandal	Halfbeak gillnet			1,750.50	14.30%
Koh Kong	Oknha Lyon Phat	Mackerel Gillnet	50.0	20.00%	42.6	18.50%
Koh Kong	Oknha Lyon Phat	Octopus trap longline	195.0	28.20%	306.7	13.10%
Kep	Ampeng	Unspecified gear	6.3	10.10%		
Koh Kong	Thmasar	Push net	33.5	25.40%	26.0	92.30%
Sihanouk	Stueng Hav	Shrimp gillnet			20.2	17.70%
Kep	Ampeng	Squid tow longline			16.5	9.10%
Kampot	Kampong Kandal	Trawl[1]			32.4	8.10%
Kampot	Trapeang Ropov	Trawl			47.8	4.50%
Kep	Ampeng	Trawl			34.3	3.60%
Koh Kong	Oknha Lyon Phat	Trawl			4,500.00	77.80%
Koh Kong	Thmasar	Trawl			52.9	0.80%
Sihanouk	Stueng Hav	Trawl			2,227.90	31.90%
Sihanouk	Tumnup Rolok	Trawl			100.0	9.80%

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	18.8%	76.7%	3.0%	1.5%	48,552.0	69.5%
Fish gillnet	11.3%	54.7%	32.8%	1.2%	7,512.0	10.8%
Halfbeak gillnet			100.0%		3,501.0	5.0%
Fish trap	100.0%				2,250.0	3.2%
Octopus trap longline	100.0%				2,230.0	3.2%
Fish gillnet and Shrimp gillnet	100.0%				1,500.0	2.1%
Crab gillnet	3.3%	89.9%		6.8%	1,355.6	1.9%
Bottom longline for Squid	100.0%				830.0	1.2%
Crab trap	54.4%		11.4%	34.2%	735.6	1.1%
Mackerel Gillnet	100.0%				398.0	0.6%
Squid tow longline	89.7%			10.3%	390.0	0.6%
Shrimp gillnet		100.0%			181.8	0.3%
Push net	100.0%				119.0	0.2%
Unspecified gear	6.5%			93.5%	105.9	0.2%
Centipede trap	27.6%			72.4%	71.8	0.1%
Crab gillnet and Shrimp gillnet		100.0%			40.0	0.1%
Fish hook	100.0%				25.0	0.04%
Fish longline	100.0%				20.0	0.03%
Blood cockle dragnet	100.0%				12.0	0.02%
Fish hook and Fish gillnet	100.0%				10.0	0.01%

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

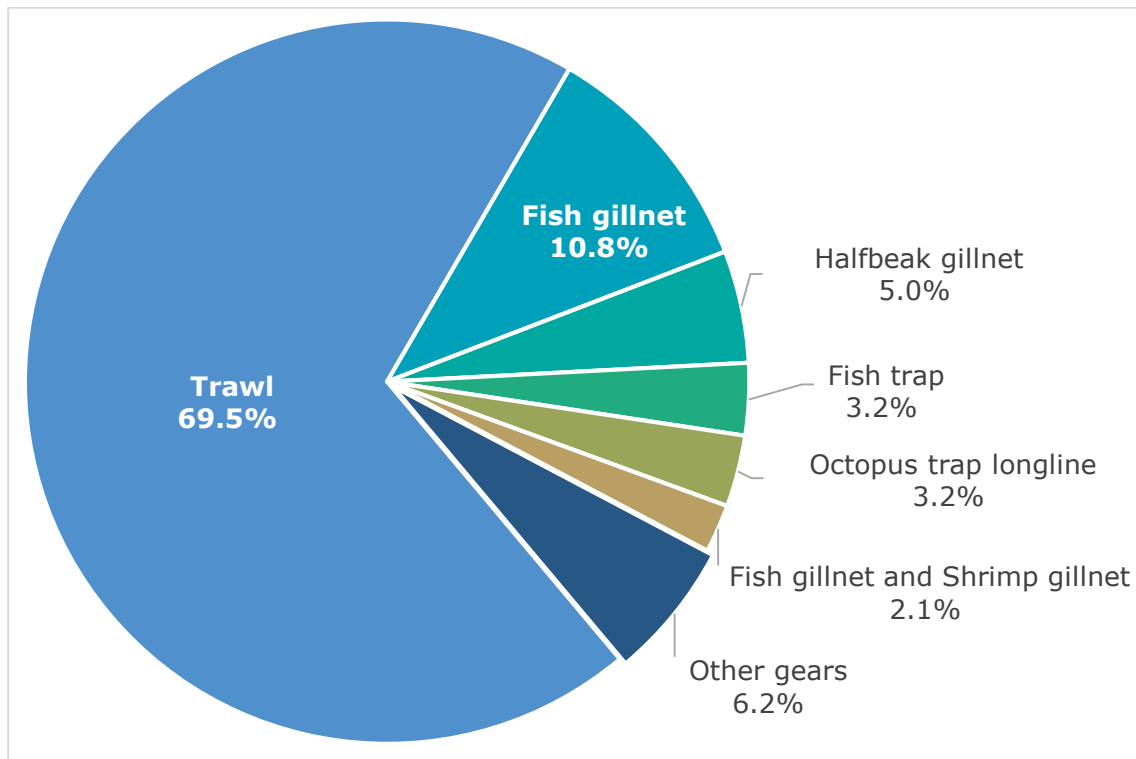| Gear	Koh Kong	Preah Sihanouk	Kampot	Kep	Total kg	%Total
Grand Total	26.0%	61.3%	10.8%	1.9%		

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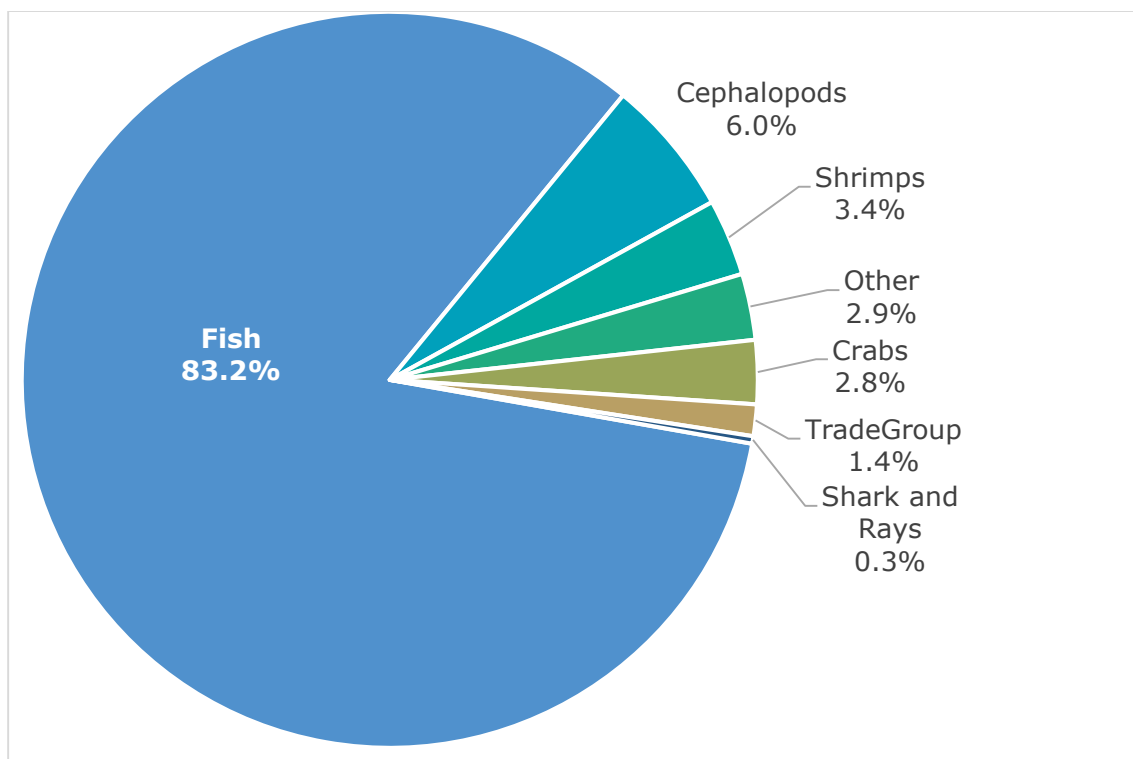
2.2. Catch and value by species

Figure 2. Contribution of main aquatic animal groups to reported catch (total reported weight: 80,015.3 kg).

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

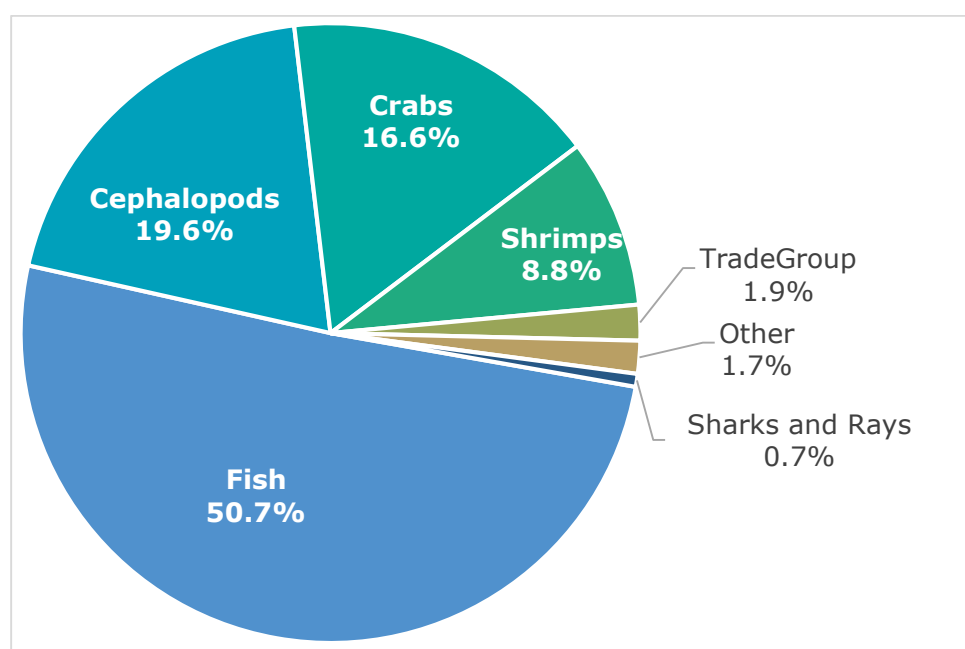| Scientific name	English Common	Catch	Catch%	
			%Total	%Cum.[2]
Encrasicholina heteroloba	Shorthead anchovy	35,190.0	44.0%	44.0%
	Other fish nei	18,033.0	22.5%	66.5%
	Needlefish nei	3,002.5	3.8%	70.3%
Penaeus sp.	Prawns nei	2,312.3	2.9%	73.2%
	Other catch nei	2,301.0	2.9%	76.0%
	Squids nei	2,287.5	2.9%	78.9%
	Octopus	2,261.3	2.8%	81.7%
Portunus pelagicus	Swimming crab	2,205.7	2.8%	84.5%
Decapterus macrosoma	Shortfin scad	1,625.0	2.0%	86.5%
	Trash fish	1,259.0	1.6%	88.1%
Megalaspis cordyla	Torpedo scad	1,005.0	1.3%	89.3%
Siganus canaliculatus	Whitespotted Spinefoot	944.0	1.2%	90.5%
Anodontostoma chacunda	Chacunda gizzard shad	758.0	1.0%	91.5%
Rastrelliger brachysoma	Short mackerel	606.0	0.8%	92.2%
Selaroides leptolepis	Yellow stripe trevally	600.0	0.8%	93.0%
	Shellfish nei	500.0	0.6%	93.6%
Decapterus maruadsi	Round scad	450.0	0.6%	94.2%
Scomberoides commersonianus	Talang queenfish	430.0	0.5%	94.7%
Sargocentron rubrum	Redcoat	400.0	0.5%	95.2%
Epinephelus coioides	Orange-spotted grouper	400.0	0.5%	95.7%
Other species		3,445.0	4.3%	100.0%
Total reported catch		**80,015.3**		

Figure 3.   Proportion of total reported value (1000 Riel), by main aquatic animal group (Total reported value: 403,260,000 Riel).

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[2] This represents the cumulative proportion, as a measure for the diversity of the catches.

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)
	Other fish nei	76,175	18.9%	18.9%	4,000
Portunus pelagicus	Swimming crab	65,930	16.3%	35.2%	27,000
	Squids nei	52,481	13.0%	48.3%	18,000
Encrasicholina heteroloba	Shorthead anchovy	39,830	9.9%	58.1%	1,000
Penaeus sp.	Prawns nei	28,733	7.1%	65.3%	20,000
	Octopus	23,504	5.8%	71.1%	12,000
	Needlefish nei	12,013	3.0%	74.1%	5,000
Decapterus macrosoma	Shortfin scad	11,765	2.9%	77.0%	7,000
Sargocentron rubrum	Redcoat	8,400	2.1%	79.1%	21,000
Epinephelus coioides	Orange-spotted grouper	8,400	2.1%	81.1%	21,000
	Lizardfish	8,400	2.1%	83.2%	21,000
Rastrelliger brachysoma	Short mackerel	6,729	1.7%	84.9%	6,000
	Other catch nei	6,202	1.5%	86.4%	4,000
Siganus canaliculatus	Whitespotted Spinefoot	5,575	1.4%	87.8%	5,000
Megalaspis cordyla	Torpedo scad	5,025	1.2%	89.1%	5,000
Scomberoides commersonianus	Talang queenfish	3,470	0.9%	89.9%	8,000
Selaroides leptolepis	Yellow stripe trevally	3,400	0.8%	90.8%	6,000
Decapterus maruadsi	Round scad	3,320	0.8%	91.6%	7,000
Suborder Sepiina	Cuttlefish	3,113	0.8%	92.4%	12,000
Lutjanus argentimaculatus	Mangrove red snapper	3,000	0.7%	93.1%	10,000
Other species		27,796	6.9%	100.0 %	
Total reported value		**403,260**			

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

Annex 1. Species catch by province for October 2022 (total reported catch: 80,015.3 kg)

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	Proportion
Encrasicholina heteroloba	Shorthead anchovy	កាកឹម			2,040.0	33,150.0	35,190	43.98%
	Other fish nei	ប្រភេទត្រីចំរុះ	746.0	372.0	13,960.0	2,955.0	18,033	22.54%
	Needlefish nei	ត្រីផ្ដោង	3,000.5	2.0			3,003	3.75%
Penaeus sp.	Prawns nei	បង្គា	479.3	2.0	289.5	1,541.5	2,312	2.89%
	Other catch nei	ផ្សេងៗ	2,301.0				2,301	2.88%
	Squids nei	មឹក	11.0	8.0	1,806.0	462.5	2,288	2.86%
	Octopus	មឹកពើងពាង	253.8	83.5	1,830.0	94.0	2,261	2.83%
Portunus pelagicus	Swimming crab	ក្ដាមសេះ	251.4	359.0	414.0	1,181.3	2,206	2.76%
Decapterus macrosoma	Shortfin scad	ត្រីកាម៉ុងឬត្រីធ្នាធូ	100.0			1,525.0	1,625	2.03%
	trash fish	ត្រីជី	144.0	46.0	48.0	1,021.0	1,259	1.57%
Megalaspis cordyla	Torpedo scad	ត្រីកន្ធយរវៃង				1,005.0	1,005	1.26%
Siganus canaliculatus	Whitespotted Spinefoot	ត្រីកន្ថ្លាំងក្រអូម	44.0		900.0		944	1.18%
Anodontostoma chacunda	Chacunda gizzard shad	ត្រីកាម៉យ	720.0	18.0		20.0	758	0.95%
Rastrelliger brachysoma	Short mackerel	ត្រីផ្លាធូ ឬត្រីកាម៉ុងខ្លួនខ្លី	178.0		428.0		606	0.76%
Selaroides leptolepis	Yellow stripe trevally	ត្រីឆ្នូតលឿង			600.0		600	0.75%
	Shellfish nei	ខ្យង មឹក ក្ដាមផ្សេងៗ			500.0		500	0.62%
Decapterus maruadsi	Round scad	ត្រីកូនគុំ			120.0	330.0	450	0.56%

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	Proportion
Scomberoides commersonianus	Talang queenfish	ត្រីកាឡ្យាំង				430.0	430	0.54%
	Lizardfish	ត្រីក្តុចិន			400.0		400	0.50%
Epinephelus coioides	Orange-spotted grouper	ត្រីតុកតែកៅ			400.0		400	0.50%
Sargocentron rubrum	Redcoat	ត្រីកាជឺ			400.0		400	0.50%
Rastrelliger faughni	Island mackerel	ត្រីប៉ាឡ្យាំង	301.0				301	0.38%
Lutjanus argentimaculatus	Mangrove red snapper	ត្រីអាំងកឺយក្រហម			300.0		300	0.37%
Suborder Sepiina	Cuttlefish	មឹកស្មុក	27.5	45.5	200.0	13.5	287	0.36%
	Small mixed shrimp nei	គី		182.5			183	0.23%
	Cephalopods (octopus)	ពពួកមឹកពីងពាង			170.0	5.0	175	0.22%
Nemipterus hexodon	Ornate treadfin bream	ត្រីអាងគីមលី			175.0		175	0.22%
	Cephalopods (squids/cuttlefish)	ពពួកមឹកស្មុកនិងមឹកបំពង់	55.0	26.0		66.5	148	0.18%
	Mollusks nei	សប្បើសត្វ ពពួកខ្យង គ្រំ ងាវ	3.0	85.0		50.0	138	0.17%
Auxis thazard	Bullet tuna	ត្រីកាឡ្យាំង				130.0	130	0.16%
Penaeus monodon	Giant tiger prawn	បង្កាខ្លែង	6.0	108.5			115	0.14%
	Sharks	ឆ្លាម				112.5	113	0.14%

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	Proportion
	Crabs (swimming crab, mud crab)	ពពួកក្តាម (រួមទាំងក្តាមសេះ ក្តាមថ្ម ក្តាមជំរ ជាដើម)		96.5	8.0		105	0.13%
	Pony fishes	ត្រីគិ	100.0				100	0.12%
	Mantis shrimp	បង្គងកណ្ដប	33.8		15.8	33.0	83	0.10%
	Rays nei	បបែល				82.0	82	0.10%
	Parrot fish	ត្រីសេក	39.0	21.0			60	0.07%
	squirrelfish	ត្រីក្រហម	60.0				60	0.07%
	Terapons	ត្រីត្រសក់	55.0				55	0.07%
Sardinella gibbosa	goldstripe sardine	ត្រីគួន				50.0	50	0.06%
	Shrimps (all kinds of shrimps)	ពពួកបង្គាគ្រប់ប្រភេទទាំងអស់	45.0				45	0.06%
Panna microdon	Panna croaker	ត្រីប្រម៉ា	40.0		1.0		41	0.05%
Chiloscyllium punctatum	Brownbanded bambooshark	ឆ្លាមឆ្នូត			40.0		40	0.05%
	Rabbitfish	ត្រីកន្ទាំង	24.5	14.0			39	0.05%
Lates calcarifer	Barramundi	ត្រីឆ្លង់ស		35.0			35	0.04%
Scylla serrata	Mud crab	ក្តាមថ្ម			31.3		31	0.04%
Brevitrygon imbricata	Scaly whipray	បបែលមាន់				23.0	23	0.03%
Sphyraena obtusata	Obtuse barracuda	ត្រីអវែ្រង	20.0	2.0			22	0.03%

Scientific name	English Common	Khmer Name	Kampot	Kep	Koh Kong	Sihanouk	Total	Proportion
	Breams	ត្រីក្រហម ឬត្រីឆ្នូតពីរ			20.0		20	0.02%
	Lobster	បង្កងប៉ាក	1.0	11.0		1.0	13	0.02%
Eleutheronema tetradactylum	Fourfinger threadfin	ត្រីកាវ៉ា	7.0			4.0	11	0.01%
Scomberomorus sp.	Spanish mackerel species nei	ត្រីបេកា			10.3		10	0.01%
Anadara granosa	Blood cockle	ត្រែងឈាម			10.0		10	0.01%
Metapenaeus spp.		បង្កាថ្មីខាក់				9.0	9	0.01%
Arius maculatus	Spotted catfish	ត្រីក្នុក			6.0		6	0.01%
Portunus spp.	Swimming crabs	ក្តាមសេះ	6.0				6	0.01%
Rastrelliger kanagurta	Indian mackerel	ត្រីកាម៉ុងខ្លួនវែង			5.0		5	0.01%
Saurenchelys cancrivora	Slender Sorcerer	ត្រីខ្លឹងសមុទ្រ		5.0			5	0.01%
Sepioteuthis lessoniana	Bigfin reef squid	មឹកហ្វយសាយ				5.0	5	0.01%
Pseudorhombus arsius	Largetooth flounder	ត្រីអណ្ណាតផ្ទែ	0.5		2.5		3	0.00%
Acanthurus lineatus	Lined surgeonfish	ត្រីកាតាំងឆ្លក		2.0			2	0.00%
Chiloscyllium griseum	Grey bambooshark	ឆ្លាមគីង្គក់ឬឆ្លាមឆ្លក		2.0			2	0.00%
Leiognathus smithhursti	Smithhurst's ponyfish	ត្រីកិខ្លួនខ្លី		2.0			2	0.00%
Scarus ghobban	Blue-barred parrotfish	ត្រីសេកស្រការឿង		2.0			2	0.00%
Crenimugil seheli	Bluespot mullet	ត្រីក្បក			1.0		1	0.00%