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Abbreviation: *Res.inf.Ser.*

Scientists onboard the survey vessel	
Month/ vessel	<i>Matsya Varshini</i>
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**RESULTS OF FISHERY RESOURCES SURVEY,
ASSESSMENT AND MONITORING ALONG SOUTH-WEST COAST DURING
APRIL TO JUNE 2017**

INTRODUCTION

The survey vessel **MFV *Matsya Varshini*** was in operation during the period from April to June 2017 for demersal fishery resources survey along the south west coast of Kerala and conducted bottom trawling at a depth range of 30-100 m in the area lying between latitudes 9⁰ N and 11⁰ N. Since the vessel **MFV *Lavanika*** was under propeller shaft repair, she could not be deployed for demersal fishery resources survey. Details of resource availability and its distribution as observed during the quarter both in terms of time and space are presented in this issue.

Craft and Gear

Expo model fish trawl (Head rope length - 45.6 m) and 47m shrimp trawl (code-end mesh size-30 mm) were operated by the vessel **MFV *Matsya Varshini***.

SURVEY ACCOMPLISHMENT

Table 1: Details of survey vessels operation during April to June 2017

MFV <i>Matsya Varshini</i> (36.5 m OAL)	Days out at sea	59
	No. of fishing days	43
	Fishing effort (hrs)	149.83
	Catch landed (kg)	3740.2 Kg
	Area of operation	Lat.9⁰N-11⁰ N/Long. 75⁰ E-76⁰ E
	Depth of operation	29-51 m
MFV <i>Lavanika</i> (24.5 m OAL)	: Not operated	

MFV *Matsya Varshini*

During the quarter the vessel **MFV *Matsya Varshini*** conducted 3 survey cruises. She was out at sea for 59 days, conducted fishing survey for 43 days and expended 149.83 hrs of actual fishing effort in the Latitudes 9⁰ N and 10⁰N for demersal resources survey. Month wise operational parameters is furnished in the table-2

Table: 2. Month -wise accomplishment of operational parameters of *Matsya Varshini*

Month	No of cruises	Days at sea	Days fished	Area (Lat.°N)	Depth (m)	No of hauls	Fishing effort (hr)	CPUE (Kg/hr)
April 2017	1	20	16	9 & 10	29-40	41	59.83	19.64
May 2017	1	19	16	9 &10	30-42	38	56.75	24.70
June 2017	1	20	11	9	30-51	23	34.5	43.41

2.1 Resources distribution

a) Catch composition:

During this quarter, the total catch and average catch rate (kg/hr) were 3.74 tons and 24.96 kg/hr respectively. The non-conventional resources like jelly fish, miscellaneous fishes and molluscan shells formed about 46% of the total catch. Among the commercially important groups, nemipterids contributed 9.02% followed by squid (7.06%), barracuda (6.82%), carangids (6.49%), crabs (5.97%) and lizard fish (5.25%).

b). Geographical and bathymetric distribution:

The major demersal groups such as nemipterids, squids, carangids and crab were more concentrated in the depth range of 30- 50 m whereas lizard fish and groupers were recorded more from above 50 m depth. Barracuda moderately distributed in all the depth zones. Jelly fish and the miscellaneous group of fishes were distributed up to the depth of 50 m. The latitude- wise landings and catch per unit effort (CPUE) are shown in table -3

Table: 3. Latitude-wise catch and catch per unit effort (CPUE/Kg)

Latitude	9 ⁰ N	10 ⁰ N	9 ⁰ N	10 ⁰ N
Effort	143.84	4.5	cpue (kg/hr)	cpue(kg/hr)
Total catch (Kg)	3602.57	132.25	25.05	29.39
Shark	0.75	-	0.01	-
Barracuda	222	20	1.54	4.44
Bulls eye	54	5	0.38	1.11
Ribbon fish	119	-	0.83	-
Eel	14.5	-	0.10	-
Groupers	29.5	-	0.21	-
Upenids	13.35	5	0.09	1.11
Lizard fish	196.2	11	1.36	2.44
Nemipterids	282	30	1.96	6.67
Silverbelly	18.25	1	0.13	0.22
Squid	225.2	18	1.57	4.00
Cuttlefish	20.25	0	0.14	-
Carrangids	206	17	1.43	3.78
Decapterids	35.1	0	0.24	-
Horse mackerel	56.55	4	0.39	0.89
Mackerel	99.7	1	0.69	0.22
Seer fish	67.17	-	0.47	-
Pomfret	9.9	-	0.07	-
Lesser Sardine	2.25	-	0.02	-
Other clupeids	16.5	-	0.11	-
Moon fish	1.5	-	0.01	-
Dhoma	2	-	0.01	-
Gerrids	5	-	0.03	-
Leather jack	15.75	-	0.11	-
Lactarius	2.9	-	0.02	-
Butter fish	1.5	-	0.01	-
Sciaenids	0.5	-	0.00	-
White promfret	0.5	-	0.00	-
Anchovies	5	-	0.03	-
Puffer fish	44.75	-	0.31	-
Shrimps	1.75	-	0.01	-
Crab	196.45	10	1.37	2.22
Sand lobster	0.25	0.25	0.00	0.06
Misc. fishes	514.55	10	3.58	2.22
Jelly fish	722	-	5.02	-
Molluscan shell	400	-	2.78	-

c). Seasonal distribution:

During the month of April, squid (11.97%), nemipterids (10.55%) and miscellaneous fishes dominated in the catch. During on set of monsoon (May) miscellaneous

group was dominated the catch by 25.63% followed by *nemipterids* (11.86%), swimming crab (10.95%) and carrangids (10.08%). Whereas, in June non-conventional group such as Jelly fish and molluscan shell formed about 83.02 % of the total catch. The depth wise/ month-wise catch per unit effort and catch composition are furnished in Table-4.

Table .4: Month wise CPUE and Catch composition of *Matsya Varshini* (April – June 2017)

Month	April	May	June		April	May	June	
Depth (m)	30-50	30-50	30-50	50-100	30-50	30-50	30-50	50-100
Species/Group	Catch Per Unit Effort (Kg/hr)				Per cent (%)			
Shark	-	-	0.03	-	-	-	0.06	-
Barracuda	1.7	1.32	2.37	0.83	8.68	5.33	5.45	8.85
Bulls eye	0.61	0.26	0.2	0.5	3.13	1.04	0.46	5.31
Ribbon fish	0.08	2.12	0.02	-	0.4	8.59	0.04	-
Eel	0.07	0.16	0.07	-	0.34	0.64	0.17	-
Groupers	0.15	0.05	0.64	1.58	0.74	0.19	1.48	16.81
Upenids	0.22	0.09	-	-	1.14	0.38	-	-
Lizard fish	1.08	2.14	-	4.67	5.51	8.65	-	49.54
Nemipterids	2.07	2.93	1.08	0.25	10.55	11.86	2.49	2.65
Silverbelly	0.18	0.16	-	-	0.91	0.64	-	-
Carrangids	1.47	2.49	-	0.25	7.49	10.08	-	2.65
Decapterids	0.37	0.24	0.04	-	1.9	0.96	0.08	-
Horse mackerel	0.95	0.07	-	-	4.81	0.3	-	-
Mackerel	0.23	1.23	0.77	-	1.19	4.96	1.78	-
Seer fish	0.95	0.2	-	-	4.82	0.79	-	-
White Pomfret	0.1	0.08	0.02	-	0.49	0.31	0.04	-
Other clupeids	0.2	0.13	-	-	1	0.53	-	-
Moon fish	0.02	0.01	-	-	0.09	0.04	-	-
Sciaenids	0.01	0.03	0.02	-	0.04	0.11	0.04	-
Gerrids	-	0.01	-	-	-	0.04	-	-
Leather jack	0.09	0.16	-	-	0.47	0.64	-	-
Lactarius	-	-	0.11	-	-	-	0.25	-
Butter fish	-	-	-	0.25	-	-	-	2.65
Anchovies	0.08	-	-	-	0.43	-	-	-
Puffer fish	0.75	-	-	-	3.81	-	-	-
Misc. fishes	2.45	6.33	1.33	0.42	12.47	25.63	3.07	4.42
Squid	2.35	1.69	0.37	0.33	11.97	6.84	0.85	3.54
Cuttlefish	0.27	0.08	-	-	1.36	0.32	-	-
Shrimps	-	0.03	-	-	-	0.13	-	-
Crab	0.85	2.71	0.31	0.33	4.34	10.95	0.71	3.54
Sand lobster	-	0.01	-	-	-	0.04	-	-
Jelly fish	2.34	-	21.36	-	11.91	-	49.2	-
Mollusc an shell	-	-	14.68	-	-	-	33.82	-
Total	19.64	24.7	43.41	9.42	100	100	100	100

Highlights of the demersal survey:

- i) The total catch and average catch rate (kg/hr) during the quarter recorded was 3.74 tons and 24.96 kg/hr respectively.
 - ii) The jelly fish, miscellaneous group of fishes and molluscan shell are formed bulk of the catch recorded in the depth range of 30-50m and above 50 m this resources was scanty.
 - iii). Latitude 10° N was found to be more productive than Lat. 9° N.
 - iv). Among the commercially important fishery resources, nemipterids contributed 9.02% followed by squid (7.06%), barracuda (6.82%), carrangids (6.49%), crabs (5.97%) and lizard fish (5.25%).
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