



CRUISE REPORT ON RESEARCH ACTIVITY

M.V.SEAFDEC 2 Cruise No. 22-6/2006

19 October– 18 November 2006

Fisheries resource survey in Vietnamese Waters

TD/RP/102

This report is base on preliminary data

For readers who may need data in the report, please contact to:

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Cruise report on Research Activity

1. Cruise Summary

Vessel name: M.V. SEAFDEC 2
Cruise no.: 22-6/2006 **Leg no:** -
Project Title: National Research Survey of Vietnamese Waters
Duration: 19 October – 18 November 2006
Covered water: Vietnamese waters, Vietnam
 Latitude 08°00'.00 N-17°00'.00 N
 Longitude 108°30'.00 E-110°00'.00 E
Port of call: Nhatrang port, Vietnam
Objective: National Research Survey of Vietnamese Waters.
 1. Fisheries resource survey by Bottom Vertical Longline and Trap.
 2. Oceanographic survey using Integrated Conductivity Temperature and Depth measuring instrument (ICTD), Thermosalinograph-fluorometer (TSG), and Bongo net.

2. List of personal on board

Ship personnel

No.	Position	Name	E-mail
1	Captain	Mr. Tossaporn Sukhapindha	tossaporn@seafdec.org
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4	Third officer	Mr. Somphote Vudthipanyo	
5	Second engineer	Mr. Komson Sangphuek	
6	Fishing Assistant	Mr. Aussawin Buachuay	
7	Boatswain	Mr. Vudthirat Vudthipanyo	
8	Steerman	Mr. Pradit Kui-prasert	
9	Steerman	Mr. Tana Rungjoy	
10	Able seaman	Mr. Somkiat Phetrasatien	
11	Fitter	Mr. Nuttapong Chaitanavisut	
12	Oiler	Mr. Plew Shodok	
13	Oiler	Mr. Boontarin Wara-in	
14	Oiler	Mr. Watchara Panasri	
15	Cook	Mr. Saichol Kornnoom	
16	Ship's boy	Mr. Somsak Phangkumhuk	

SEAFDEC Researchers

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3. Observation Summary

Oceanographic survey summary

Oceanographic observations were carried out from 24 October – 10 November 2006 by M.V.SEAFFDEC 2 at 19 stations in Vietnam waters. Each station conducted with two main activities composing of physical and biological oceanographic survey. The equipments that were used in each station are shown in **Table 1**.

iCTD (SeaBird 911)

M.V.SEAFFDEC2, iCTD systems equipped with three main sensors for conductivity, temperature and depth and four auxiliary sensors for dissolved oxygen, pH, chlorophyll fluorometer and PAR in order to obtain the vertical profiles of water characters. Additionally, twelve carousel water sample (1.7 liter Niskin Bottles) which is a part of CTD system were used to collect water sample from standard depth (Standard depth can be seen in enclosed file, CTD Data logsheet).

iCTD was deployed from the sea surface to approximately 5-10 m above sea bottom with constant velocity 0.3-0.5 m/s depending on sea condition and retrieved to the surface at speed of 0.5 m/s. All parameters in each station were divided into down cast



and upper cast and average into every 1 m interval. Profile of parameters in down cast including temperature, salinity, oxygen, pH and fluorescence chlorophyll-a of down cast in each station are shown in **Appendix I**.

Water samplings were collected during retrieving iCTD from bottom to surface at standard depth. They then were filtered through Whatman GFC filter paper and stored in the freezer at -25 °C for nutrient analysis (nitrite, nitrate, phosphate and silicate) at SEAFDEC/Training Department laboratory. All samples will be analyzed within two month. Then data will be sent to Vietnam national coordinator.

Remark: In case of terrible sea condition, iCTD could not operated such station no. 2(02), 3(04), 4(03), 5(05), 7(07), 8(08), 9(09) and 11(12.) Temperature and Depth recorder was used for collected temperature and depth data and carousel water sample was used to collect water sampling for salinity measuring.

Thermosalinograph with Fluorometer (TSG-Fluorometer)

TSG – Fluorometer were operated during MV.SEAFDEC2 was sailing along the cruise track. The system was designed to continuously record three parameters including temperature, salinity and fluorescence chlorophyll-a, at approximately 5 meters below the sea surface. The data were average every 6 second. Operating summary is shown in **Table 2**.

Bongo net equipped with flowmeter



Bongo net consisted of two circular frames, each 60 cm in diameter, fitted with zooplankton and larvae net with mesh size of 330 μm and 500 μm , respectively. A flow meter was mounted in the aperture of each net to provide data on the water volume passing through during each tow. Each station bongo net was operated with oblique method and towed at slow ship speed 1.5-2.5 knots approximately and angel of towing wire was maintained at 30-45° angle. This provides a minimum of variation in the biases caused by uneven filtration per unit depth, avoidance of the net, and escapement or extrusion of larvae through the meshes. The wire length was release from surface to 80-100 m with wire speed of 0.3 m/s in both of releasing and retrieving (0.3 is maximum speed of ship's winch).

The plankton samplings were immediately preserved in 5% formalin with adding sodium borate buffer.

Number of revolution and quality of water (m³) per one flow meter revolution in front of zooplankton and larvae net is shown in **Table 3**.

Fishing survey summary

In this survey, 2 kinds of fishing gear were used for sampling.

Bottom Vertical Longline

This survey was operated bottom vertical longline total 19 stations. The maximum catch was about 18.27 kg. at operation no. 1 (station no.01).

Trap

This survey was operated crab trap and ell pot total 4 stations. The maximum catch was about 6.38 kg. at operation no. 1 (station no.01). In operation no. 3 and 4, the fishing gear was sunk and lost in the sea.

The detail of fishing operation had shown in fishing logsheet in **Appendix II**.

Table 1. Partial detail of oceanographic survey station of cruise no.21-5/2006

St.No.	Date	Time	Latitude	Longitude	Oceanographic instruments				Transparency		Bottom Depth (m)	Filename		
					CTD	TD	TSG	Bongo	Sechi disc (m)	Foral scale		CTD	TD	TSG
1(01)	24/10/06	15:35	16_50.83 N	109_17.06 E	✓		✓	✓	15.7	3	120	s2d22001		20061025(1)
2(02)	25/10/06	14:00	16_53.62 N	109_36.83 E		✓	✓		-	-	183		st02(02)	20061025(2)
3(04)	26/10/06	15:00	15_57.37 N	109_21.52 E		✓	✓		-	-	154		st03(04)	20061026(1)
4(03)	28/10/06	14:48	15_43.45 N	109_03.46 E		✓	✓	✓	14.1	3	103		st04(03)	20061028(1)
5(05)	29/10/06	07:50	15_00.33 N	109_17.57 E		✓	✓	✓	14.5	3	98		st05(05)	20061029(1)
6(06)	29/10/06	13:07	14_54.11 N	109_26.90 E	✓		✓	✓	20.3	3	140	s2d22006		20061029(2)
7(07)	30/10/06	09:41	13_54.91 N	109_23.86 E		✓	✓	✓	6.0	4	122		st07(07)	20061030(1)
8(08)	30/10/06	16:43	13_40.03 N	109_31.34 E		✓	✓	✓	-	-	140		st08(08)	20061030(2)
9(09)	31/10/06	08:16	12_56.19 N	109_34.08 E		✓	✓		-	-	132		st09(09)	20061031(1)
10(11)	6/11/06	07:52	12_07.23 N	109_31.99 E	✓	✓	✓	✓	5.0	4	127	s2d22010	Bongo_st10(11)	20061106(1)
11(12)	6/11/06	11:11	11_49.44 N	109_39.28 E		✓	✓	✓	12.4	3	138		st11(12)	20061106(2)
12(13)	7/11/06	08:02	10_59.90 N	109_09.18 E	✓		✓	✓	4.5	4	109	s2d22012		20061107(1)
13(14)	7/11/06	12:46	10_54.91 N	109_23.44 E	✓	✓	✓	✓	-	-	123	s2d22013	st13(14)	20061107(2)
14(16)	8/11/06	09:50	10_12.93 N	109_10.19 E	✓		✓	✓	8.0	3	140	s2d22014		20061108(1)
15(15)	8/11/06	12:37	10_04.97 N	109_08.62 E	✓		✓	✓	6.6	3	150	s2d22015		20061108(2)
16(18)	9/11/06	08:04	09_12.71 N	108_59.86 E	✓		✓	✓	15.5	3	130	s2d22016		20061109(1)
17(17)	9/11/06	12:20	09_02.80 N	108_46.55 E	✓	✓	✓	✓	11.8	3	113	s2d22017	Bongo_st17(17)	20061109(2)
18(20)	10/11/06	08:00	08_12.06 N	108_49.01 E	✓	✓	✓	✓	-	-	115	s2d22018	Bongo_st18(20)	20061110(1)
19(19)	10/11/06	12:20	07_59.84 N	108_39.52 E	✓	✓	✓	✓	16.9	3	108	s2d22019	Bongo_st19(19)	20061110(2)

Table 2. Operation summary of Thermosalinograph with Fluorometer (TSG-Fluorometer)

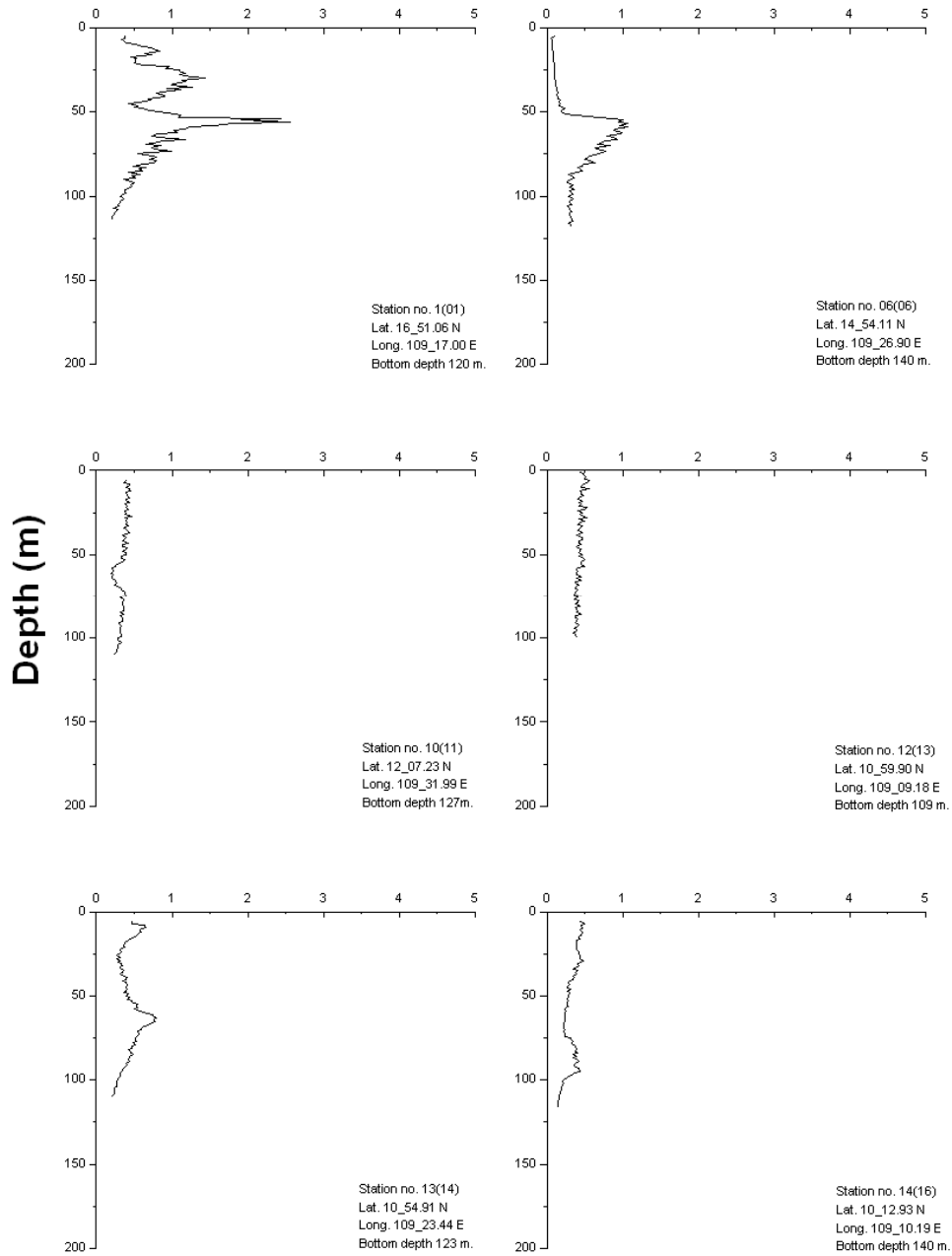
Date	File name	Start	Destination
24/10/06	20061025(1)	st01(01)	st02(02)
25/10/06	20061025(2)	st02(02)	st03(04)
26/10/06	20061026(1)	st03(04)	st04(03)
28/10/06	20061028(1)	st04(03)	st05(05)
29/10/06	20061029(1)	st05(05)	st06(06)
29/10/06	20061029(2)	st06(06)	st07(07)
30/10/06	20061030(1)	st07(07)	st08(08)
30/10/06	20061030(2)	st08(08)	st09(09)
31/10/06	20061031(1)	st09(09)	Nhatrang Port
6/11/06	20061106(1)	st10(11)	st11(12)
6/11/06	20061106(2)	st11(12)	st12(13)
7/11/06	20061107(1)	st12(13)	st13(14)
7/11/06	20061107(2)	st13(14)	st14(16)
8/11/06	20061108(1)	st14(16)	st15(15)
8/11/06	20061108(2)	st15(15)	st16(18)
9/11/06	20061109(1)	st16(18)	st17(17)
9/11/06	20061109(2)	st17(17)	st18(20)
10/11/06	20061110(1)	st18(20)	st19(19)
10/11/06	20061110(2)	st19(19)	Nhatrang Port

Tabel 3. Summary of flow meter in every bongo net survey station

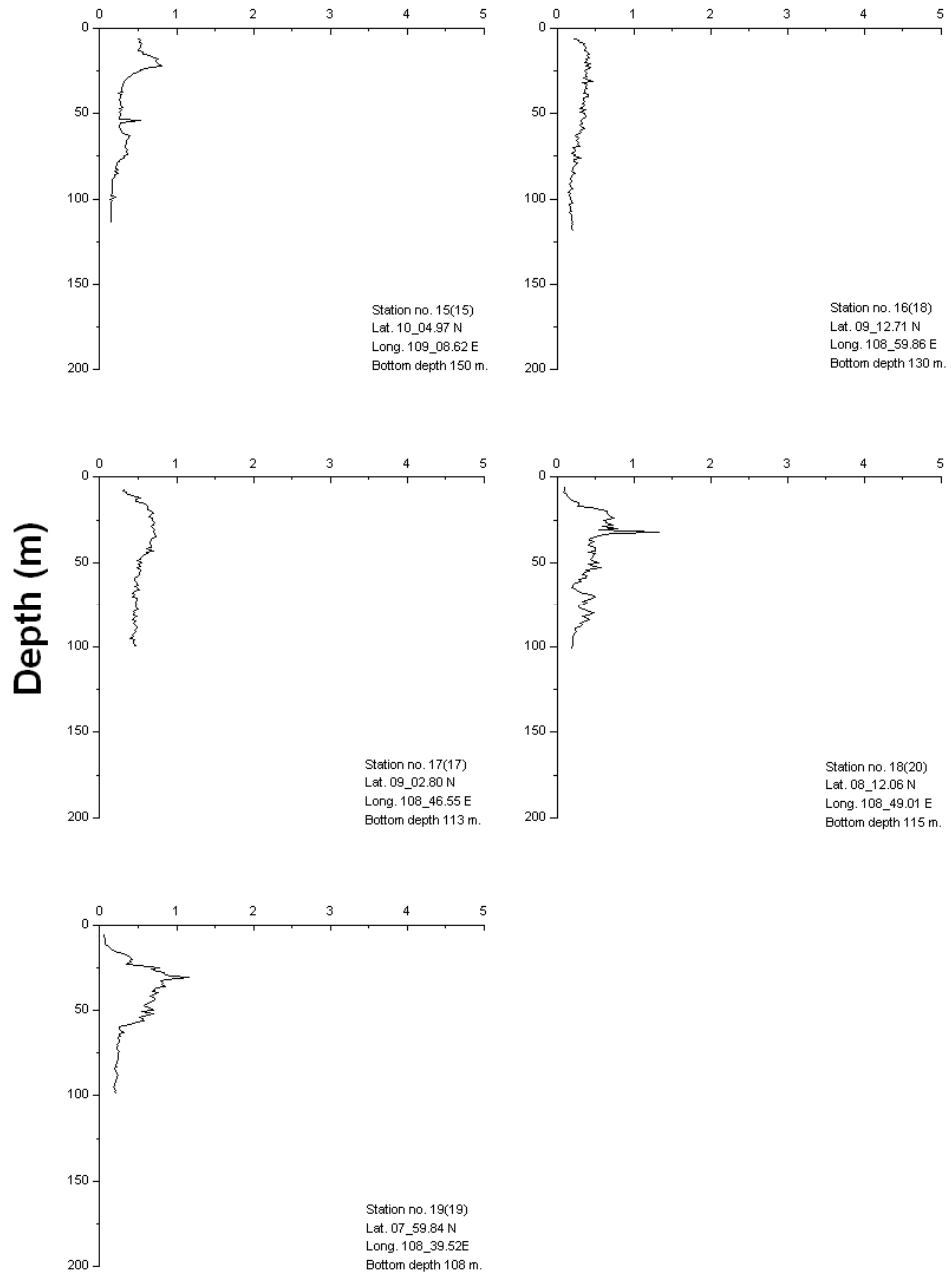
Station	Fish larvae		Zooplankton	
	Number of revolution	Calibration (cycle/m ³)	Number of revolution	Calibration (cycle/m ³)
1(01)	2872	0.0848	2472	0.0848
2(02)	-	-	-	-
3(04)	-	-	-	-
4(03)	2840	0.0848	2792	0.0848
5(05)	2646	0.0848	2600	0.0848
6(06)	2551	0.0848	2465	0.0848
7(07)	2147	0.0848	2116	0.0848
8(08)	2940	0.0848	2912	0.0848
9(09)	-	-	-	-
10(11)	3419	0.0848	3333	0.0848
11(12)	3564	0.0848	3433	0.0848
12(13)	2934	0.0848	2803	0.0848
13(14)	3628	0.0848	3409	0.0848
14(16)	2929	0.0848	2706	0.0848
15(15)	3510	0.0848	3246	0.0848
16(18)	2601	0.0848	2438	0.0848
17(17)	3031	0.0848	2875	0.0848
18(20)	3043	0.0848	2918	0.0848
19(19)	2730	0.0848	2605	0.0848

Appendix I

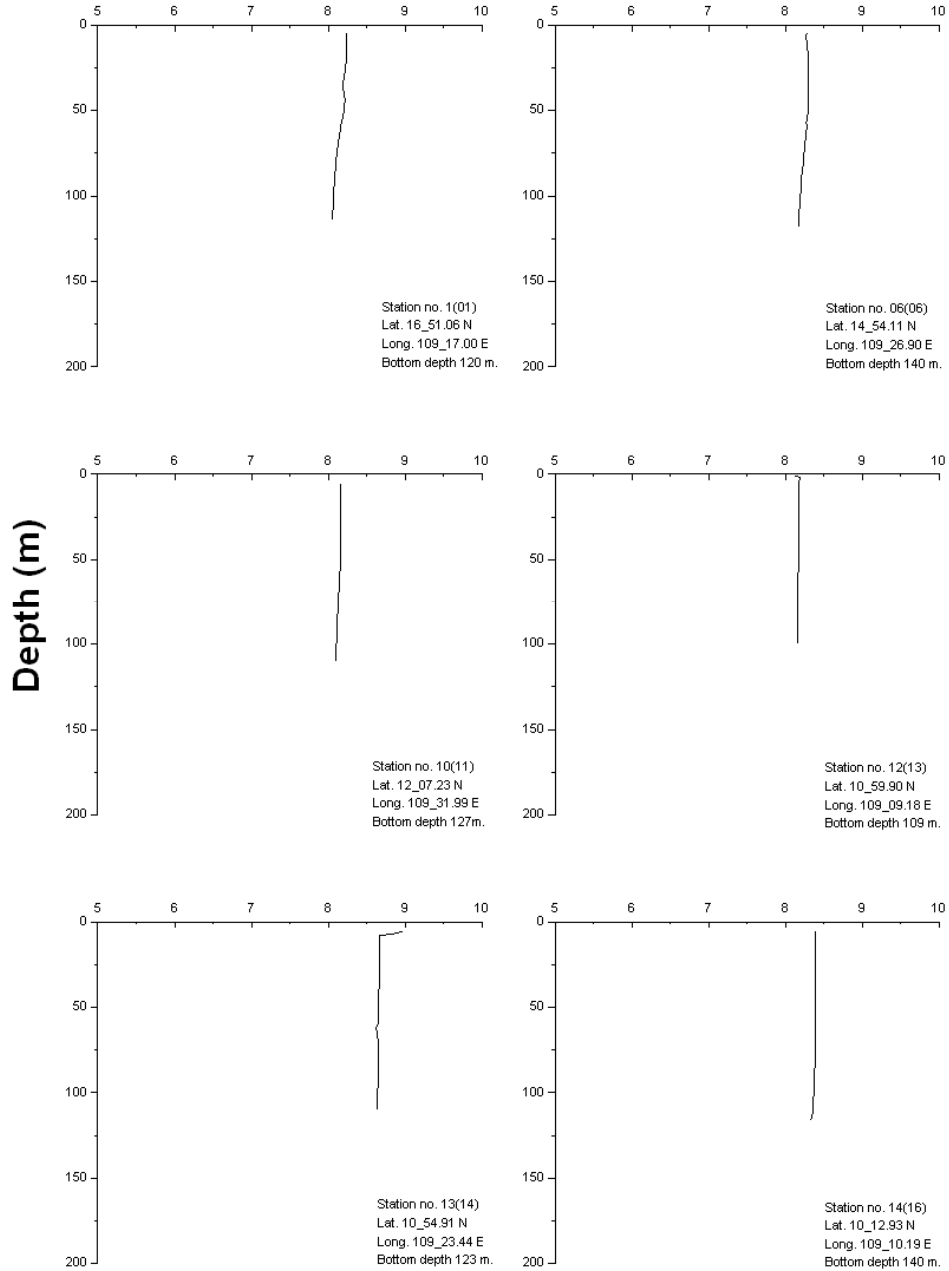
Fluorescence



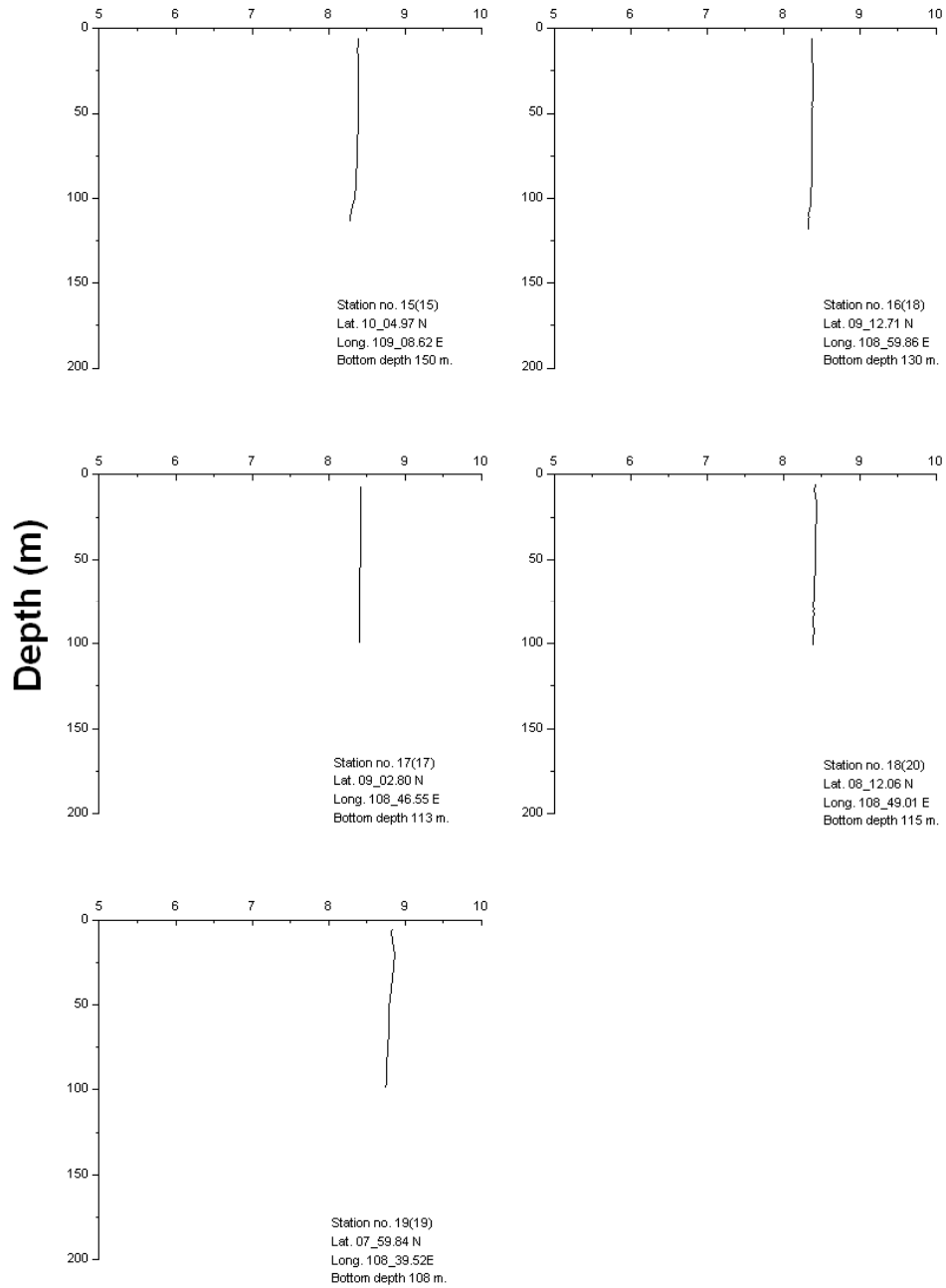
Fluorescence



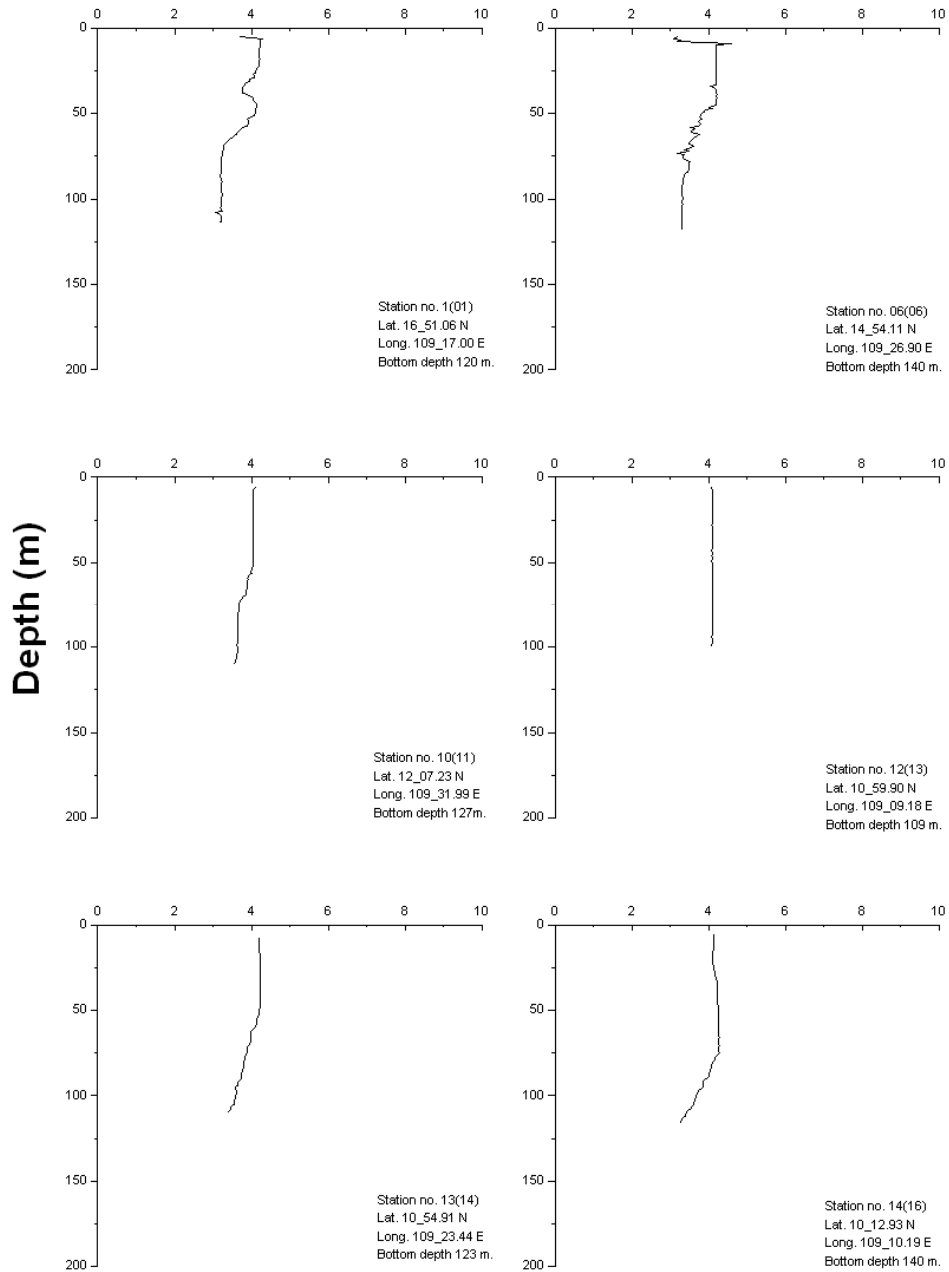
pH



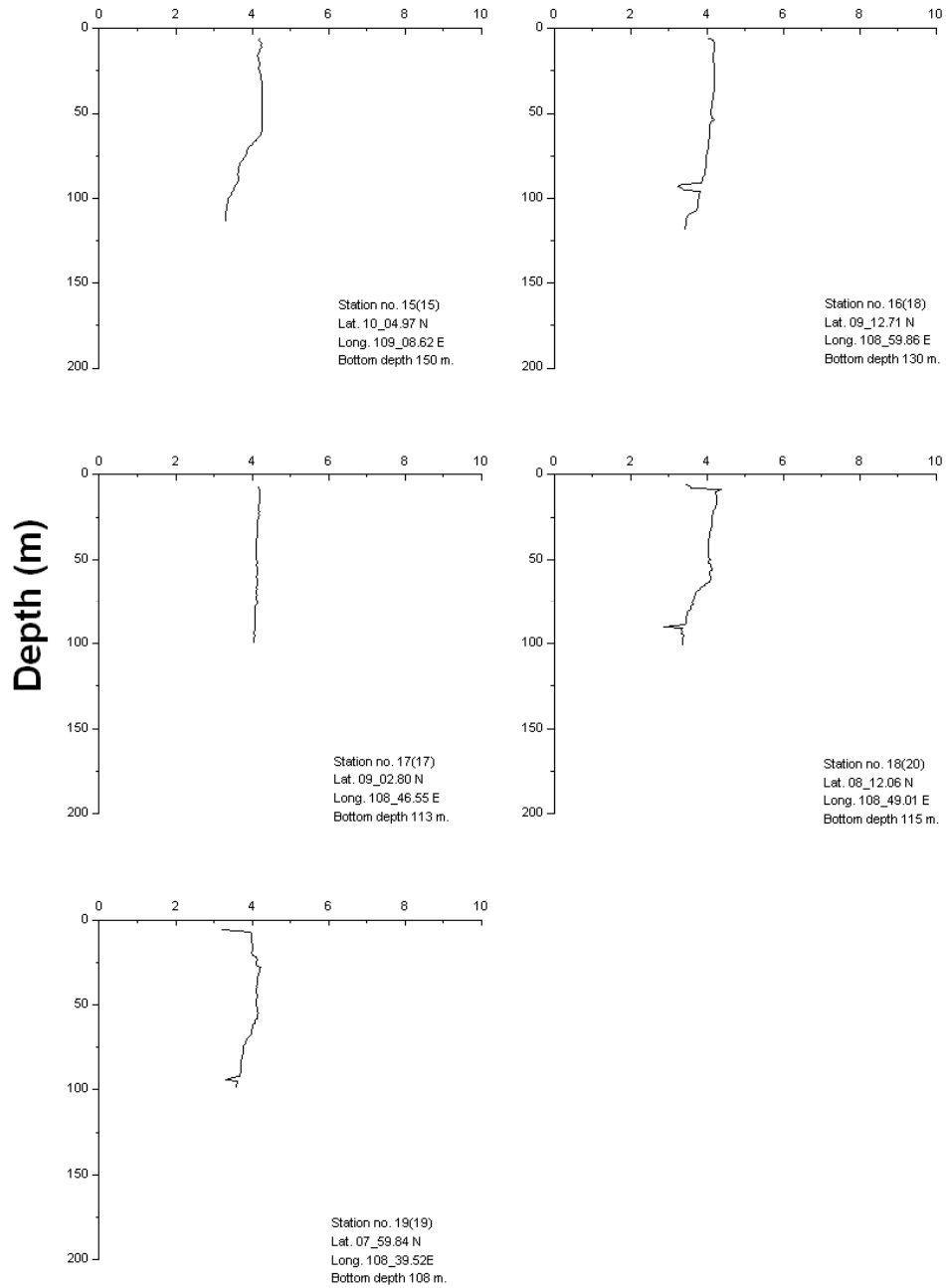
pH



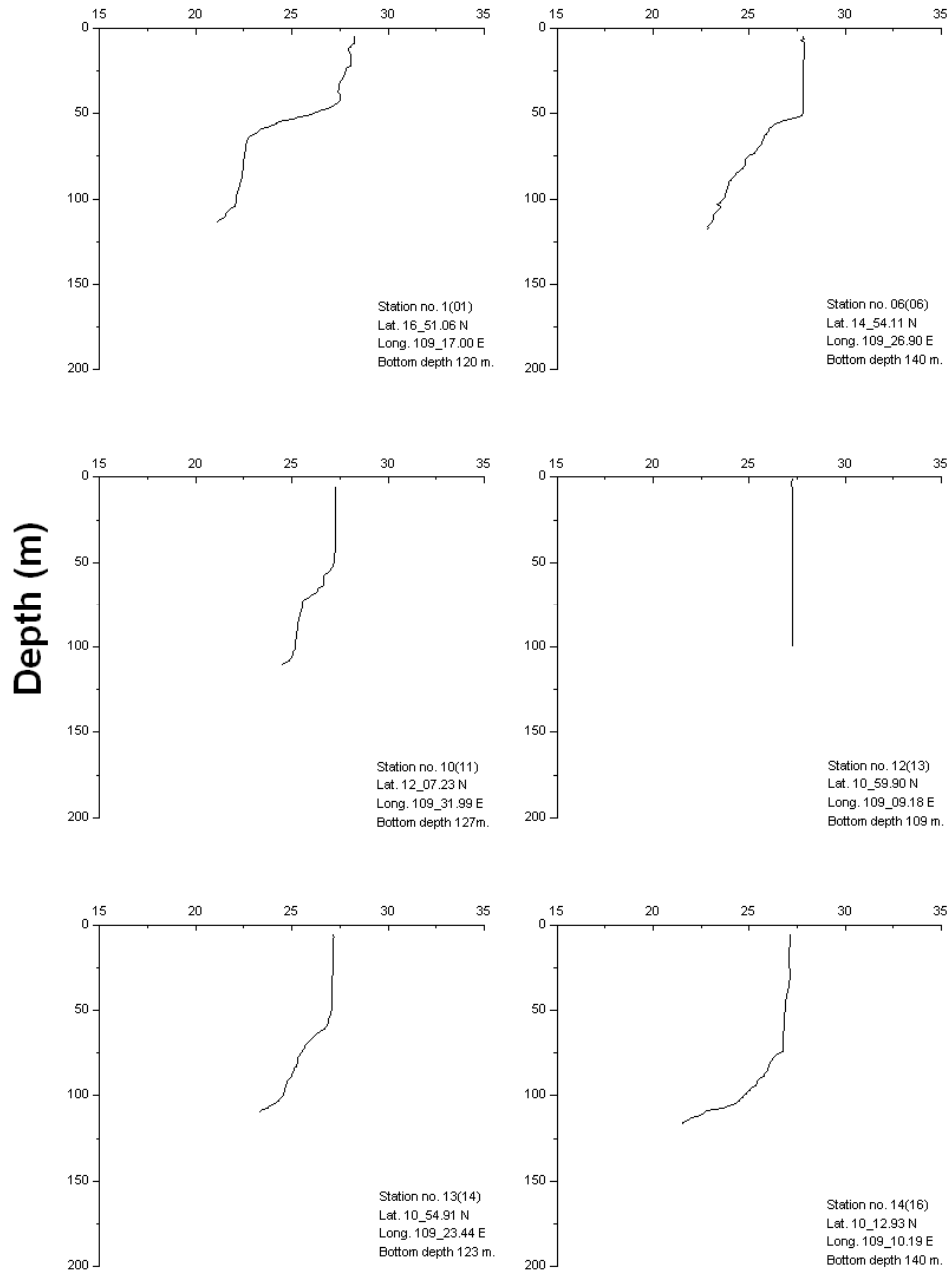
Oxygen (ml/l)



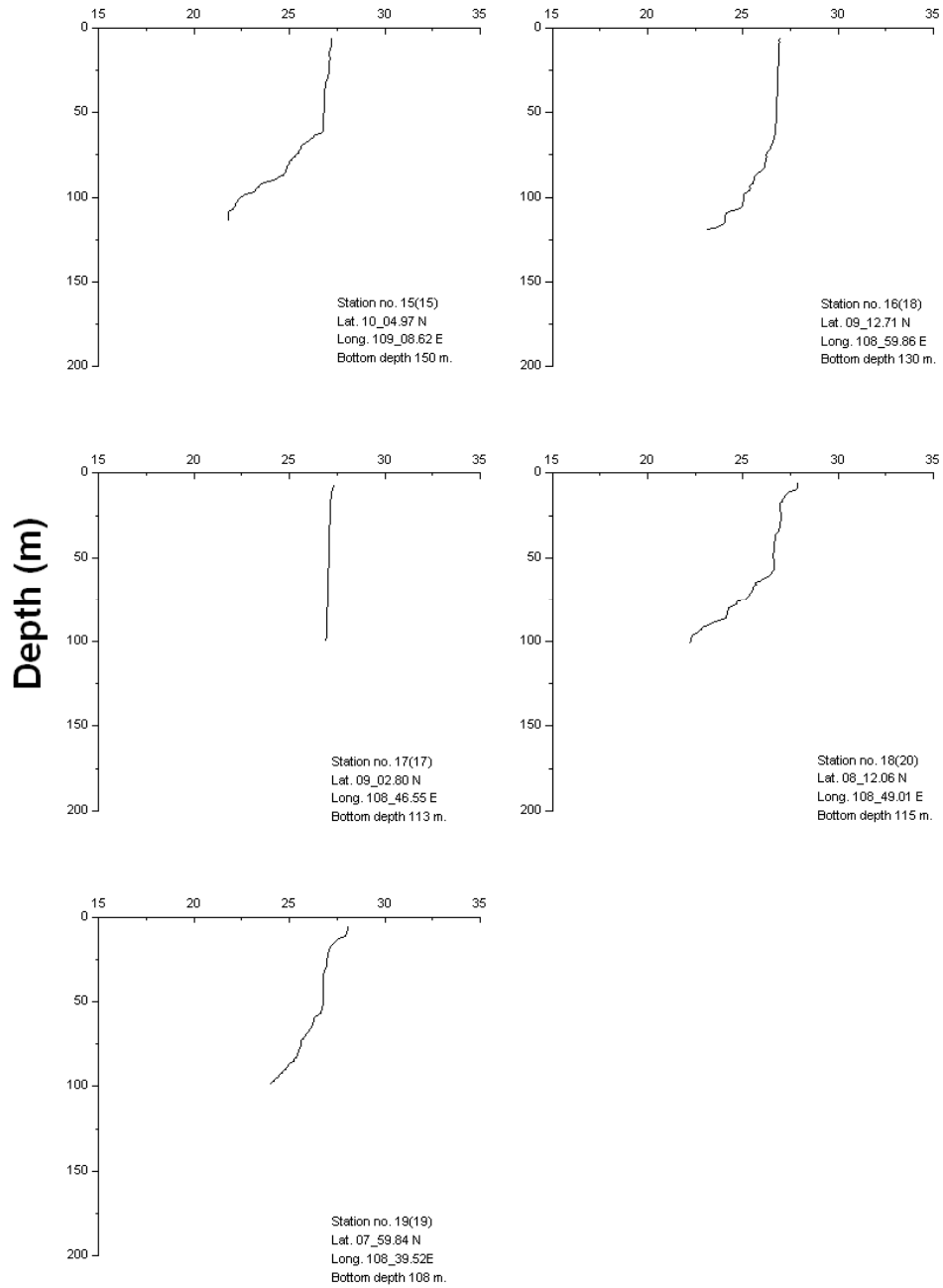
Oxygen (ml/l)



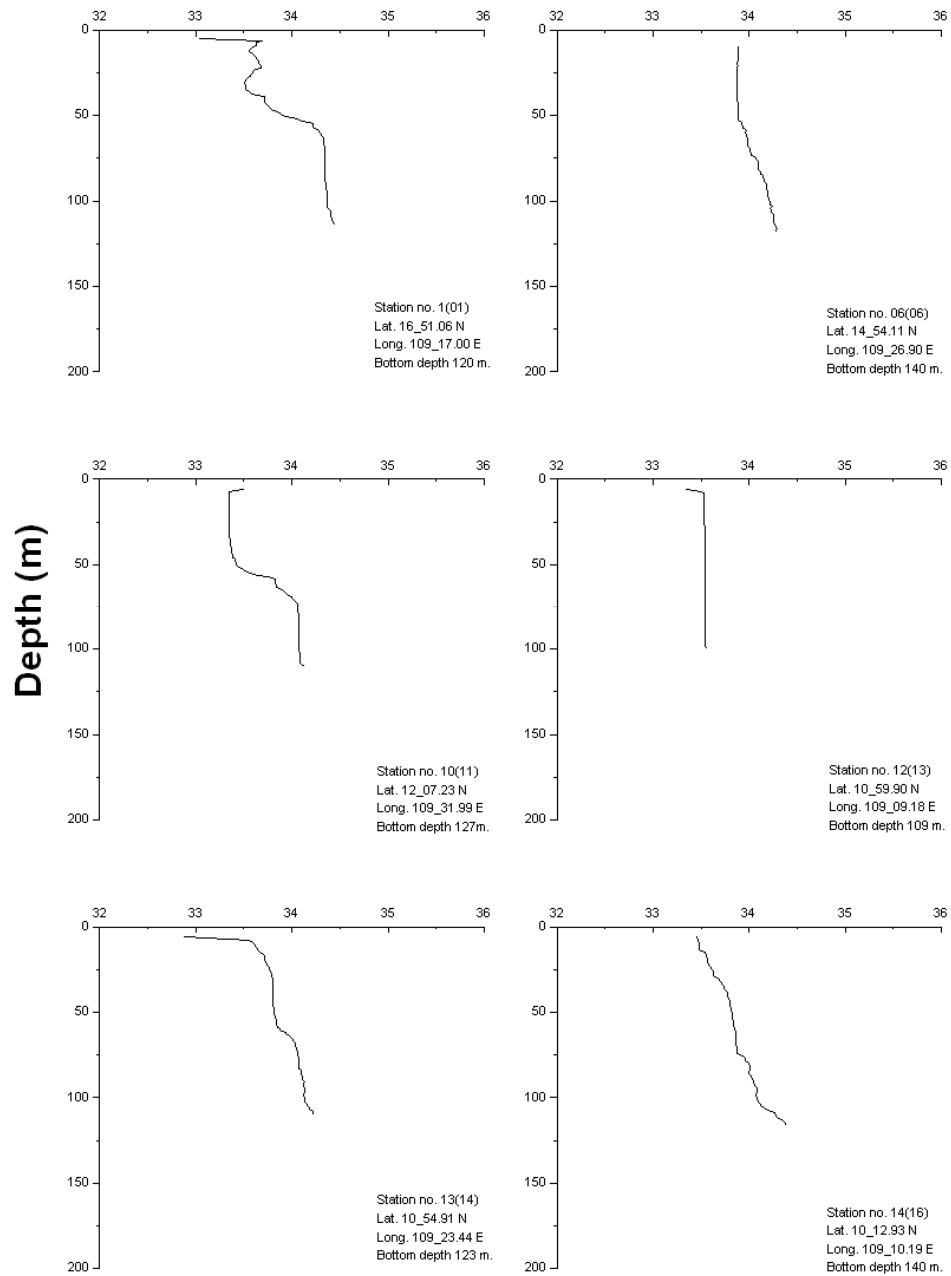
Temperature (°C)



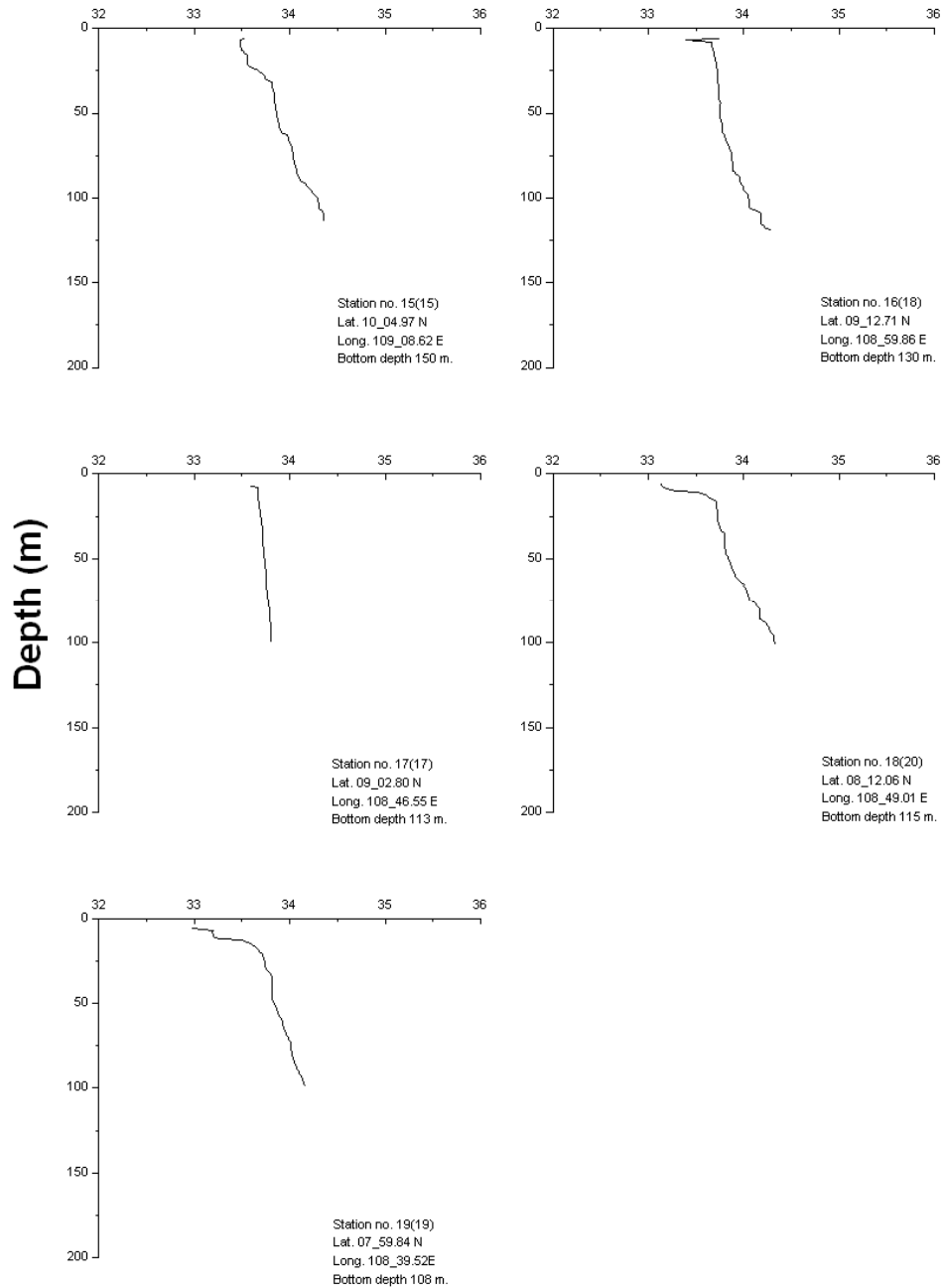
Temperature (°C)



Salinity (PSU)



Salinity (PSU)



Appendix II

TRAP FISHING LOGSHEET Operation No.1



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel			Air temp: 29.2 °C
Survey station No: 01		M.V.SEAFFDEC 2			Air pressure: 1016 mbar
Date: 24-Oct-06					Humidity : 73 %
Moon age: 2 phase 5		Start shooting <u>24/10/06</u>	Finish shooting <u>24/10/06</u>	Water	
Wind		Time 1455	Time 1520	Surface temp: 28.4 °C	
Spd (kt)	Direction	Latitude 16°52'.60 N	Latitude 16°51'.20 N	Bottom temp. °C	
6	090°	Longitude 109°16'.80 E	Longitude 109°17'.10 E	Transparency: 23cos35° m	
Weather cond: Cloudy		Start hauling <u>25/10/06</u>	Finish hauling <u>25/10/06</u>	Current	
Sea condition: Sligth		Time 0530	Time 0645	Depth	Spd (kt) Direction
Fishing gear		Latitude 16°51'.41 N	Latitude 16°52'.20 N	5	0.8 180°
Type of trap :crab/eel trap		Longitude 109°17'.10 E	Longitude 109°16'.90 E	25	0.7 186°
Total No.of trap: 80		Depth of capture:119 m	Bottom type :Muddy/sand	50	0.6 185°
Type of bait : scad		Memorandum: Shooting speed 3 knot Sea depth 119 m			Total catch in number: 63 pcs.
Immersion time: 17 hrs 11 min		Total distance 1.4 nm cos° 168°			Total catch in weight: 6.38 kg

No.	Species	Number	Weight (kg)	Remarks
	Crab trap			
1	<i>Charybdis anulata</i>	44	3.7	
2	<i>Uroconger lepturus</i>	1	0.5	
3	<i>Gymnothorax fimbriatus</i>	2	1.3	
	Eel pot			
1	<i>Charybdis anulata</i>	9	0.30	
2	<i>Carcinoplax longimanus</i>	2	0.02	
3	<i>Carcinoplax sp</i>	1	0.01	
4	<i>Gymnothorax fimbriatus</i>	2	0.30	
5	<i>Gymnothorax minor</i>	1	0.15	
6	<i>Uroconger lepturus</i>	1	0.10	
	Total	63	6.38	

TRAP FISHING LOGSHEET
Operation No.2



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.96 °C
Survey station No: 02		M.V.SEAFFDEC 2				Air pressure: 1017.5 mbar
Date: 25-Oct-06						Humidity : 85 %
Moon age: 3 phase 6		Start shooting <u>25/10/06</u>	Finish shooting <u>25/10/06</u>	Water		
Wind		Time 1128	Time 1147	Surface temp: 28.1 °C		
Spd (kt)	Direction	Latitude 16°55'.47 N	Latitude 16°54'.56 N	Bottom temp. °C		
20	050°	Longitude 109°36'.90 E	Longitude 109°35'.97 E	Transparency: m		
Weather cond: Cloudy		Start hauling <u>26/04/05</u>	Finish hauling <u>26/04/05</u>	Current		
Sea condition: Rought		Time 1647	Time 1812	Depth	Spd (kt)	Direction
Fishing gear		Latitude 16°54'.20 N	Latitude 16°54'.70 N	5	1.2	216°
Type of trap :crab/eel		Longitude 109°36'.40 E	Longitude 109°36'.50 E	25	0.9	205°
Total No.of trap: 80		Depth of capture:175 m	Bottom type :Muddy/sand	50	1	216°
Type of bait : scad		Memorandum: Shooting speed 3 knot Sea depth 175 m				Total catch in number: 0 pcs.
Immersion time: 5 hrs 56 min		Total distance 1.2 nm cos° 224°				Total catch in weight: 0 kg

TRAP FISHING LOGSHEET
Operation No.3



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27.7 °C
Survey station No: 04		M.V.SEAFFDEC 2				Air pressure: 1016 mbar
Date: 26-Oct-06						Humidity : 77 %
Moon age: 4 phase 7		Start shooting <u>26/10/06</u>	Finish shooting <u>26/10/06</u>	Water		
Wind		Time 0630	Time 0650	Surface temp: 28.25 °C		
Spd (kt)	Direction	Latitude 15°58'.80 N	Latitude 15°58'.60 N	Bottom temp. °C		
18	070°	Longitude 109°21'.20 E	Longitude 109°20'.20 E	Transparency: m		
Weather cond: Cloudy		Start hauling <u>26/04/05</u>	Finish hauling <u>26/04/05</u>	Current		
Sea condition: Rought		Time		Depth	Spd (kt)	Direction
Fishing gear		Latitude		5	1.2	162°
Type of trap :crab/eel		Longitude		25	1.4	163°
Total No.of trap:65		Depth of capture:151 m	Bottom type :Muddy/sand	50	1.1	166°
Type of bait : scad		Memorandum: Shooting speed 3 knot Sea depth 151 m				Total catch in number: pcs.
Immersion time:		Total distance 1.0 nm cos° 258°				Total catch in weight: kg

No.	Species	Number	Weight (kg)	Remarks
	<i>All of mainline and float was sinked</i>			

TRAP FISHING LOGSHEET
Operation No.4



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel M.V.SEAFFDEC 2				Air temp: 28.89 °C	
Survey station No: 11						Air pressure: 1014.5 mbar	
Date: 05-Nov-06		Start shooting <u>05/11/06</u> Finish shooting <u>05/11/06</u>				Humidity : 71 %	
Moon age: 14 phase 100						Water	
Wind		Time	1005	Time	1019	Surface temp: 27.33 °C	
Spd (kt)	Direction	Latitude	12°09'.12 N	Latitude	12°07'.63 N	Bottom temp. N/R °C	
20	020°	Longitude	109°32'.41 E	Longitude	109°31'.89 E	Transparency: N/R m	
Weather cond: bc		Start hauling <u>26/04/05</u>		Finish hauling <u>26/04/05</u>		Current	
Sea condition: Slight		Time				Depth	
Fishing gear		Latitude				Spd (kt)	
Type of trap :crab/eel trap		Longitude				Direction	
Total No.of trap:50		Depth of capture:132 m		Bottom type :Muddy/sand		50	
Type of bait : scad		Memorandum: Shooting speed 6 knot Sea depth 132 m Total distance nm cos ^o °				Total catch in number: pcs.	
Immersion time:							

No.	Species	Number	Weight (kg)	Remarks
<i>All of mainline and float was sinked</i>				

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.1



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27.96 °C
Survey station No: 01		M.V.SEAFFDEC 2				Air pressure: 10.16 mbar
Date: 24-Oct-06						Humidity : 72 %
Moon age: 02 phase 5		Start shooting <u>24/10/06</u>	Finish shooting <u>24/10/06</u>		Water	
Wind		Time	1404	Time	1440	Surface temp: 28.25 °C
Spd (kt)	Direction	Latitude	16°51'.43 N	Latitude	16° 52'.90 N	Bottom temp: 21 °C
4	090°	Longitude	109°16'.59 E	Longitude	109°16'.30 E	Thermocline : 45-70m/27.5-22.5C°
Weather cond: Cloudy		Start hauling <u>25/10/06</u>	Finish hauling <u>25/10/06</u>		Current	
Sea condition: Slight		Time	1628	Time	1747	Depth
Gear		Latitude	16°51'.20 N	Latitude	16°52'.10 N	Spd (kt)
Total hook no: 720		Longitude	109°16'.70 E	Longitude	109°16'.40 E	Direction
No. hook/branch line 6		Memorandum:				50
Immersion time: 3 hrs 13 min		Sea depth 120 m				0.8
Type of bait: squid		Total distance 1.5 nm cos ^o 350°				190°
		Shooting speed 3 knot				Total catch in number: 30 pcs.
						Total catch in weight: 18.27 kg

No.	Species	Number	Weight (kg)	Remarks
1	<i>Lagocephalus lunaris</i> (Green rough -backed puffer)	20	12.70	
2	<i>Lagocephalus inermis</i> (Smooth blaasop)	1	3.00	
3	<i>Gymnothorax fimbriatus</i> (Fimbriated moray)	3	0.50	
4	<i>Gymnothorax minor</i>	3	0.50	
5	<i>Evenchelys macrurus</i> (Slender giant moray)	2	1.50	
6	<i>Decapterus maruadsi</i> (Japanese scad)	1	0.07	
	Total	30.00	18.270	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.2



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.6 °C	
Survey station No: 02		M.V.SEAFFDEC 2				Air pressure: 1017.5 mbar	
Date: 25-Oct-06						Humidity : 85 %	
Moon age: 03 phase 10		Start shooting <u>25/10/06</u>	Finish shooting <u>25/10/06</u>		Water		
Wind		Time 1045	Time 1112	Surface temp: 28 °C			
Spd (kt)	Direction	Latitude 16°54'.70 N	Latitude 16° 55'.40 N	Bottom temp: N/R °C			
20	060°	Longitude 109°36'.50 E	Longitude 109°37'.30 E	Thermocline : N/R			
Weather cond: Cloudy		Start hauling <u>25/10/06</u>	Finish hauling <u>25/10/06</u>		Current		
Sea condition: Rought		Time 1510	Time 1638	Depth	Spd (kt)	Direction	
Gear		Latitude 16°54'.00 N	Latitude 16°54'.20 N	10	1	149°	
Total hook no: 540		Longitude 109°36'.70 E	Longitude 109°36'.70 E	25	0.9	151°	
No. hook/branch line 6		Memorandum:			50	1.1	150°
Immersion time: 4 hrs 53 min		Sea depth 175 m			Total catch in number: 12 pcs.		
Type of bait: squid		Total distance 1.5 nm cos ^o 350°			Total catch in weight: 9.4 kg		
		Shooting speed 3 knot					

No.	Species	Number	Weight (kg)	Remarks
1	<i>Branchiostergus auratus</i>	2	1.00	
2	<i>Sphoeroides pachygaster</i>	1	1.10	
3	<i>Lipocheilus carnolabrum</i>	1	1.90	
4	<i>Etelis radiosus</i>	1	3.60	
5	<i>Gymnothorax pictus</i> (Peppered moray)	2	0.60	
6	<i>Gymnothorax nuchiomer</i> (Starry moray)	1	0.10	
7	<i>Arisoma anago</i>	4	1.10	
	Total	12.00	9.400	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.3



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27.6 °C	
Survey station No: 04		M.V.SEAFFDEC 2				Air pressure: 1015.5 mbar	
Date: 26-Oct-06						Humidity : 84 %	
Moon age: 04 phase 17		Start shooting <u>26/10/06</u>		Finish shooting <u>26/10/06</u>		Water	
Wind		Time	0545	Time	0620	Surface temp: 28.2 °C	
Spd (kt)	Direction	Latitude	15°58'.60 N	Latitude	15° 58'.60 N	Bottom temp: N/R °C	
12	060°	Longitude	109°19'.80 E	Longitude	109°21'.40 E	Thermocline : N/R	
Weather cond: Cloudy		Start hauling <u>26/10/06</u>		Finish hauling <u>26/10/06</u>		Current	
Sea condition: Rought		Time	1050	Time	1258	Depth	Spd (kt) Direction
Gear		Latitude	15°57'.50 N	Latitude	15°57'.70 N	10	0.8 155°
Total hook no: 630		Longitude	109°21'.10 E	Longitude	109°20'.10 E	25	1.3 166°
No. hook/branch line 6		Memorandum:				50	1.0 166°
Immersion time: 5 hrs 54 min		Sea depth 150 m				Total catch in number: 5 pcs.	
Type of bait: squid		Total distance 1.2 nm cos° 090°				Total catch in weight: 1.1 kg	
		Shooting speed 3 knot					

No.	Species	Number	Weight (kg)	Remarks
1	<i>Nemipterus bathybius</i>	1	0.10	
2	<i>Gymnothorax minor</i>	3	0.50	
3	<i>Sphoeroides pachygaster</i>	1	0.50	
	Total	5	1.10	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.4



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 30 °C	
Survey station No: 03		M.V.SEAFFDEC 2				Air pressure: 1015.5 mbar	
Date: 28-Oct-06						Humidity : 93 %	
Moon age: 06 phase 35		Start shooting <u>28/10/06</u>		Finish shooting <u>28/10/06</u>		Water	
Wind		Time	1200	Time	1232	Surface temp: 28.2 °C	
Spd (kt)	Direction	Latitude	15°44'.95 N	Latitude	15° 45'.30 N	Bottom temp: N/R °C	
12	040°	Longitude	109°02'.07 E	Longitude	109°03'.60 E	Thermocline : N/R	
Weather cond: Cloudy		Start hauling <u>28/10/06</u>		Finish hauling <u>28/10/06</u>		Current	
Sea condition: Moderate		Time	1555	Time	1658	Depth	Spd (kt) Direction
Gear		Latitude	15°43'.00 N	Latitude	15°42'.40 N	10	1.3 119°
Total hook no: 540		Longitude	109°03'.50 E	Longitude	109°04'.60 E	25	1.00 127°
No. hook/branch line 6		Memorandum:				50	1.00 154°
Immersion time: 4 hrs 10 min		Sea depth 100 m				Total catch in number: 16 pcs.	
Type of bait: squid		Total distance 1.4 nm cos ^o 330° Shooting speed 1.5knot				Total catch in weight: 6.8 kg	

No.	Species	Number	Weight (kg)	Remarks
1	<i>Lagocephalus lunaris</i> (Green rough -backed puffer)	13	5.30	
2	<i>Terapon jabuar</i>	1	0.50	
3	<i>Gymnothorax minor</i>	1	0.20	
4	<i>Muraenesox cinereus</i>	1	0.80	
	Total	16	6.80	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.5



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 26.9 °C	
Survey station No:05		M.V.SEAFDEC 2				Air pressure: 1013.5 mbar	
Date: 29-Oct-06						Humidity : 84 %	
Moon age: 07 phase 46		Start shooting <u>29/10/06</u>		Finish shooting <u>29/10/06</u>		Water	
Wind		Time	0453	Time	0530	Surface temp: 27.9 °C	
Spd (kt)	Direction	Latitude	15°01'.50 N	Latitude	15° 02'.10 N	Bottom temp: N/R °C	
10	030°	Longitude	109°16'.50 E	Longitude	109°17'.60 E	Thermocline : N/R	
Weather cond: Cloudy		Start hauling <u>29/01/06</u>		Finish hauling <u>29/01/06</u>		Current	
Sea condition: Rough		Time	0854	Time	0950	Depth	Spd (kt) Direction
Gear		Latitude	14°59'.70 N	Latitude	14°59'.10 N	5	1.54 122°
Total hook no: 530		Longitude	109°17'.70 E	Longitude	109°18'.50 E	25	1.00 117°
No. hook/branch line 8		Memorandum:				50	1.1 030°
Immersion time: 4 hrs 10 min		Sea depth 97 m				Total catch in number: 6 pcs.	
Type of bait: squid		Total distance 1.2 nm cos° 060°				Total catch in weight: 3.1 kg	
		Shooting speed 2.6 knot					

No.	Species	Number	Weight (kg)	Remarks
1	<i>Lagocephalus gloveri</i>	4	2.00	
2	<i>Lagocephalus lunaris</i> (Green rough -backed puffer)	2	1.10	
	Total	6.00	3.100	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.6



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.2 °C
Survey station No: 06		M.V.SEAFFDEC 2				Air pressure: 1013.5 mbar
Date: 29-Oct-06						Humidity : 92 %
Moon age: 07 phase 46		Start shooting <u>29/10/06</u>	Finish shooting <u>29/10/06</u>		Water	
Wind		Time 1217	Time 1243	Surface temp: 27.9 °C		
Spd (kt)	Direction	Latitude 14°55'.10 N	Latitude 14° 55'.50 N	Bottom temp: N/R °C		
12	030°	Longitude 109°26'.50 E	Longitude 109°27'.30 E	Thermocline : N/R		
Weather cond: Cloudy		Start hauling <u>29/10/06</u>	Finish hauling <u>29/10/06</u>		Current	
Sea condition: Moderate		Time 1400	Time 1518	Depth	Spd (kt)	Direction
Gear		Latitude 14°53'.60 N	Latitude 14°51'.70 N	10	2.1	172°
Total hook no: 540		Longitude 109°27'.40 E	Longitude 109°27'.00 E	25	1.90	179°
No. hook/branch line 6		Memorandum:			50	2.30 186°
Immersion time: 2 hrs 09 min		Sea depth 137 - 141 m			Total catch in number: 2 pcs.	
Type of bait: squid		Total distance 0.9 nm cos° 063°			Total catch in weight: 1.0 kg	
		Shooting speed 3.0 knot				

No.	Species	Number	Weight (kg)	Remarks
1	<i>Arisoma shiroanago shiroanago</i>	1	0.20	
2	<i>Trichiurus lepturus</i>	1	0.80	
	Total	2	1.00	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.7



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27 °C	
Survey station No: 07		M.V.SEAFFDEC 2				Air pressure: 1011 mbar	
Date: 30-Oct-06						Humidity : 84 %	
Moon age: 08 phase 57		Start shooting 30/10/06		Finish shooting 30/10/06		Water	
Wind		Time	0445	Time	0520	Surface temp: 27.9 °C	
Spd (kt)	Direction	Latitude	13°58'.30 N	Latitude	13° 58'.30 N	Bottom temp: N/R °C	
18	340°	Longitude	109°23'.50 E	Longitude	109°24'.60 E	Thermocline : N/R	
Weather cond: Cloudy		Start hauling 30/10/06		Finish hauling 30/10/06		Current	
Sea condition: Rough		Time	0808	Time	0930	Depth	Spd (kt) Direction
Gear		Latitude	13°56'.10 N	Latitude	13°55'.30 N	10	2.5 163°
Total hook no: 540		Longitude	109°23'.20 E	Longitude	109°23'.80 E	25	2.2 161°
No. hook/branch line 6		Memorandum:				50	2.6 167°
Immersion time: 3 hrs 1 min		Sea depth 118 - 125 m				Total catch in number: 17 pcs.	
Type of bait: squid		Total distance 1.4 nm cos° 030°				Total catch in weight: 6.1 kg	
		Shooting speed 2.5 knot					

No.	Species	Number	Weight (kg)	Remarks
1	<i>Arisoma anago</i>	12	2.90	
2	<i>Evenchelys macrurus</i> (Slender giant moray)	5	3.20	
	Total	17	6.10	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.8



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.7 °C	
Survey station No: 08		M.V.SEAFFDEC 2				Air pressure: 1013.5 mbar	
Date: 30-Oct-06						Humidity : 86 %	
Moon age: 08 phase 57		Start shooting 30/10/06		Finish shooting 30/10/06		Water	
Wind		Time	1153	Time	1221	Surface temp: 27.8 °C	
Spd (kt)	Direction	Latitude	13°45'.78 N	Latitude	13° 43'.70 N	Bottom temp: N/R °C	
18	040°	Longitude	109°30'.30 E	Longitude	109°31'.20 E	Thermocline : N/R	
Weather cond: Cloudy		Start hauling 30/10/06		Finish hauling 30/10/06		Current	
Sea condition: Rough		Time	1530	Time	1634	Depth	Spd (kt) Direction
Gear		Latitude	13°41'.70 N	Latitude	13°40'.60 N	10	2.6 171°
Total hook no: 540		Longitude	109°30'.90 E	Longitude	109°31'.30 E	25	2.3 169°
No. hook/branch line 6		Memorandum:				50	2.4 164°
Immersion time: 4 hrs 27 min		Sea depth 140 m				Total catch in number: 2 pcs.	
Type of bait: squid		Total distance 2.3 nm cos ^o 157°				Total catch in weight: 0.5 kg	
		Shooting speed 2.5 knot					

No.	Species	Number	Weight (kg)	Remarks
1	<i>Arisoma anago</i>	1	0.30	
2	<i>Gymnothorax minor</i>	1	0.20	
	Total	2	0.50	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.9



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27 °C	
Survey station No: 09		M.V.SEAFFDEC 2				Air pressure: 1012.5 mbar	
Date: 31-Oct-06						Humidity : 92 %	
Moon age: 09 phase 68		Start shooting 31/10/06		Finish shooting 31/10/06		Water	
Wind		Time	0442	Time	0505	Surface temp: 27.9 °C	
Spd (kt)	Direction	Latitude	12°58'.10 N	Latitude	12° 58'.70 N	Bottom temp: N/R °C	
14	030°	Longitude	109°33'.80 E	Longitude	109°34'.10 E	Thermocline : N/R	
Weather cond: Cloudy		Start hauling 31/10/06		Finish hauling 31/10/06		Current	
Sea condition: Rough		Time	0617	Time	0800	Depth	Spd (kt) Direction
Gear		Latitude	12°57'.50 N	Latitude	12°57'.00 N	10	2.1 166°
Total hook no: 540		Longitude	109°34'.20 E	Longitude	109°34'.00 E	25	2.3 170°
No. hook/branch line 6		Memorandum:				50	2.3 176°
Immersion time: 1 hrs 20 min		Sea depth 135 m				Total catch in number: 15 pcs.	
Type of bait: squid		Total distance 0.7 nm cos ⁰ 026°				Total catch in weight: 12.5 kg	
		Shooting speed 2.5 knot					

No.	Species	Number	Weight (kg)	Remarks
1	<i>Pristomoides filamentosus</i>	2	5.60	
2	<i>Centroberyx druzhinini</i>	2	0.60	
3	<i>Gymnothorax mioszewska</i>	5	3.70	
4	<i>Ariosoma anago</i>	2	0.50	
5	<i>Epinephelus areolatus</i>	2	1.00	
6	<i>Epinephelus sp.</i>	2	1.10	
	Total	15.00	12.500	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.10



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.66 °C
Survey station No: 11		M.V.SEAFFDEC 2				Air pressure: 1014.5 mbar
Date: 05-Novt-06						Humidity : 71 %
Moon age: 14 phase 100		Start shooting 05/11/06		Finish shooting 05/11/06		Water
Wind		Time	1028	Time	1052	Surface temp: 27.3 °C
Spd (kt)	Direction	Latitude	12°07'.71 N	Latitude	12° 08'.42 N	Bottom temp: N/R °C
12	000°	Longitude	109°31'.60 E	Longitude	109°31'.82 E	Thermocline : N/R
Weather cond: bc		Start hauling 05/11/06		Finish hauling 05/11/06		Current
Sea condition: Slight		Time	1435	Time	0800	Depth
Gear		Latitude	12°05'.90 N	Latitude	12°57'.00 N	Spd (kt)
Total hook no: 540		Longitude	109°31'.40 E	Longitude	109°34'.00 E	Direction
No. hook/branch line 6		Memorandum:				10
Immersion time:		Sea depth 134 m				2.8
2 hrs 45 min		Total distance 0.7 nm cos ⁰ 016°				185°
Type of bait:		Shooting speed 2.0 knot				25
squid						2.8
						50
						2.4
						176°
						Total catch in number:
						6 pcs.
						Total catch in weight:
						2.65 kg

No.	Species	Number	Weight (kg)	Remarks
1	<i>Brotula multibarbata</i>	1	0.70	
2	<i>Uroconger lepturus</i> (Slender conger)	1	0.90	
3	<i>Gymnothorax mioszewsikii</i>	4	1.05	
	Total	6.00	2.650	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.11



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27.3 °C
Survey station No: 12		M.V.SEAFFDEC 2				Air pressure: 1011 mbar
Date: 06-Nov-06						Humidity : 73 %
Moon age: 15 phase 99		Start shooting 06/11/06	Finish shooting 06/11/06		Water	
Wind		Time 1250	Time 1314	Surface temp: 27.4 °C		
Spd (kt)	Direction	Latitude 11°41'.08 N	Latitude 11° 41'.60 N	Bottom temp: N/R °C		
18	000°	Longitude 109°37'.60 E	Longitude 109°37'.30 E	Thermocline : N/R		
Weather cond: Cloudy		Start hauling 06/11/06	Finish hauling 06/11/06		Current	
Sea condition: Rough		Time 1440	Time 1536	Depth	Spd (kt)	Direction
Gear		Latitude 11°38'.00 N	Latitude 11°36'.10 N	10	3.4	186°
Total hook no: 360		Longitude 109°36'.90 E	Longitude 109°36'.70 E	25	3.4	187°
No. hook/branch line 6		Memorandum:			50	2.9 196°
Immersion time: 2 hrs 06 min		Sea depth 126 m			Total catch in number: 1 pcs.	
Type of bait: squid		Total distance 0.4 nm cos ^o 236°			Total catch in weight: 0.3 kg	
		Shooting speed 2.0 knot				

No.	Species	Number	Weight (kg)	Remarks
1	<i>Lagocephalus sp.</i>	1	0.30	
	Total	1.00	0.300	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.12



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 27.5 °C
Survey station No: 13		M.V.SEAFFDEC 2				Air pressure: 1011 mbar
Date: 07-Nov-06						Humidity : 77 %
Moon age: 16 phase 95		Start shooting 07/11/06	Finish shooting 07/11/06		Water	
Wind		Time 0430	Time 0500	Surface temp: 27.3 °C		
Spd (kt)	Direction	Latitude 11°00'.20N	Latitude 11° 01'.10 N	Bottom temp: N/R °C		
8	030°	Longitude 109°09'.80 E	Longitude 109°10'.10 E	Thermocline : N/R		
Weather cond: bc		Start hauling 07/11/06	Finish hauling 07/11/06		Current	
Sea condition: Slight		Time 0850	Time 1000	Depth	Spd (kt)	Direction
Gear		Latitude 11°00'.10 N	Latitude 11°00'.60 N	10	0.1	109°
Total hook no: 540		Longitude 109°08'.70 E	Longitude 109°09'.60 E	25	0.2	220°
No. hook/branch line 6		Memorandum:			50	0.3 231°
Immersion time: 4 hrs 40 min		Sea depth 108 m			Total catch in number: 7 pcs.	
Type of bait: squid		Total distance 0.9 nm cos° 018°			Total catch in weight: 2.6 kg	
		Shooting speed 3.0 knot				

No.	Species	Number	Weight (kg)	Remarks
1	<i>Pisodonophis cancrivorus</i> (Longfin snake eel)	1	0.30	
2	<i>Ophichthus erabo</i> (Fowler's snake eel)	1	0.20	
3	<i>Apharus furca</i> (Small toothed jobfish)	1	1.40	
4	<i>Gymnothorax minor</i>	3	0.60	
5	<i>Gymnothorax chlamydatus</i>	1	0.10	
	Total	7.00	2.600	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.13



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.31 °C
Survey station No: 14		M.V.SEAFFDEC 2				Air pressure: 1012.5 mbar
Date: 07-Nov-06						Humidity : 77 %
Moon age: 16 phase 95		Start shooting 07/11/06		Finish shooting 07/11/06		Water
Wind		Time	1145	Time	1210	Surface temp: 27.2 °C
Spd (kt)	Direction	Latitude	10°57'.48N	Latitude	11° 54'.67 N	Bottom temp: N/R °C
2	200°	Longitude	109°24'.89 E	Longitude	109°23'.77 E	Thermocline : N/R
Weather cond: Cloudy		Start hauling 07/11/06		Finish hauling 07/11/06		Current
Sea condition: Slight		Time	1415	Time	1536	Depth
Gear		Latitude	10°52'.40 N	Latitude	10°50'.30 N	Spd (kt)
Total hook no: 540		Longitude	109°22'.60 E	Longitude	109°21'.70 E	Direction
No. hook/branch line 6		Memorandum:				10
Immersion time:		Sea depth 133 m				3.4
2 hrs 24 min		Total distance nm cos 018°				197°
Type of bait:		Shooting speed 5.3 knot				25
squid						3.2
						206°
						50
						3.2
						206°
						Total catch in number:
						0 pcs.
						Total catch in weight:
						0 kg

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.14



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 26.6 °C
Survey station No: 16		M.V.SEAFFDEC 2				Air pressure: 1012 mbar
Date: 08-Nov-06						Humidity : 92 %
Moon age: 17 phase 88		Start shooting 08/11/06		Finish shooting 08/11/06		Water
Wind		Time	0430	Time	0500	Surface temp: 27.1 °C
Spd (kt)	Direction	Latitude	10°18'.84N	Latitude	10° 19'.02 N	Bottom temp: N/R °C
8	030°	Longitude	109°11'.97 E	Longitude	109°11'.89 E	Thermocline : N/R
Weather cond: bc		Start hauling 08/11/06		Finish hauling 08/11/06		Current
Sea condition: Slight		Time	0806	Time	0940	Depth
Gear		Latitude	10°14'.17 N	Latitude	10°13'.43 N	Spd (kt)
Total hook no: 540		Longitude	109°10'.82 E	Longitude	109°10'.39 E	Direction
No. hook/branch line 6		Memorandum:				10
Immersion time:		Sea depth 136 m				2.9
3 hrs 07 min		Total distance 0.2 nm cos 334°				185°
Type of bait:		Shooting speed 2.0 knot				25
squid						2.6
						193°
						50
						2.0
						184°
						Total catch in number:
						13 pcs.
						Total catch in weight:
						2.9 kg

No.	Species	Number	Weight (kg)	Remarks
1	<i>Trichiurus lepturus</i>	1	0.40	
2	<i>Gymnothorax minor</i>	12	2.50	
Total		13.00	2.900	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.15



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.7 °C
Survey station No: 15		M.V.SEAFDEC 2				Air pressure: 1015 mbar
Date: 08-Nov-06						Humidity : 85 %
Moon age: 17 phase 88		Start shooting 08/11/06	Finish shooting 08/11/06		Water	
Wind		Time 1152	Time 1209	Surface temp: 27.4 °C		
Spd (kt)	Direction	Latitude 10°06'.20N	Latitude 10° 06'.20 N	Bottom temp: N/R °C		
10	040°	Longitude 109°08'.90E	Longitude 109°09.50 E	Thermocline : N/R		
Weather cond: Cloudy		Start hauling 08/11/06	Finish hauling 08/11/06		Current	
Sea condition: Slight		Time 1602	Time 1655	Depth	Spd (kt)	Direction
Gear		Latitude 10°00'.50 N	Latitude 09°59'.26 N	10	3.3	197°
Total hook no: 540		Longitude 109°06'.80 E	Longitude 109°06'.66 E	25	3.2	206°
No. hook/branch line 6		Memorandum:			50	2.6 200°
Immersion time: 4 hrs 28 min		Sea depth 147 m			Total catch in number: 1 pcs.	
Type of bait: squid		Total distance 0.6 nm cos 090°			Total catch in weight: 0.8 kg	
		Shooting speed 2.0 knot				

No.	Species	Number	Weight (kg)	Remarks
1	<i>Dentex tumifrons</i>	1	0.80	
	Total	1.00	0.800	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.16



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 25.9 °C
Survey station No: 18		M.V.SEAFFDEC 2				Air pressure: 1014.5 mbar
Date: 09-Nov-06						Humidity : 921 %
Moon age: 18 phase 81		Start shooting 09/11/06	Finish shooting 09/11/06		Water	
Wind		Time 0430	Time 0458	Surface temp: 27.1 °C		
Spd (kt)	Direction	Latitude 09°13'.78N	Latitude 09° 14'.06 N	Bottom temp: N/R °C		
10	080°	Longitude 108°59'.10E	Longitude 109°00.42 E	Thermocline : N/R		
Weather cond: Cloudy		Start hauling 09/11/06	Finish hauling 09/11/06		Current	
Sea condition: Slight		Time 0855	Time 1030	Depth	Spd (kt)	Direction
Gear		Latitude 09°12'.68 N	Latitude 09°11'.99 N	10	1.9	161°
Total hook no: 540		Longitude 108°59'.83 E	Longitude 108°59'.81 E	25	1.8	159°
No. hook/branch line 6		Memorandum:			50	1.7 144°
Immersion time: 4 hrs 56 min		Sea depth 129 m			Total catch in number: 13 pcs.	
Type of bait: squid		Total distance 1.3 nm cos 077°			Total catch in weight: 12.5 kg	
		Shooting speed 2.5 knot				

No.	Species	Number	Weight (kg)	Remarks
1	<i>Ostichthys japonicus</i>	4	3.20	
2	<i>Cookeolus japonicus</i> (Longfinned bullseyd)	1	0.40	
3	<i>Daicocus peterseni</i> (Starry flying gurnard)	1	0.20	
4	<i>Mustelus griseus</i> (Spotless smooth-hound)	3	8.10	
5	<i>Centroberyx bathybius</i>	1	0.10	
6	<i>Nemipterus bathybius</i>	1	0.10	
7	<i>Gymnothorax mioszewska</i>	2	0.40	
	Total	13.00	12.500	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.17



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.1 °C
Survey station No: 17		M.V.SEAFFDEC 2				Air pressure: 1015.5 mbar
Date: 09-Nov-06						Humidity : 78 %
Moon age: 18 phase 81		Start shooting 09/11/06	Finish shooting 09/11/06	Water		
Wind		Time 1143	Time 1203	Surface temp: 27.4 °C		
Spd (kt)	Direction	Latitude 09°03'.40N	Latitude 09° 03'.80 N	Bottom temp: N/R °C		
8	030°	Longitude 108°47'.10E	Longitude 108°47.50 E	Thermocline : N/R		
Weather cond: bc		Start hauling 09/11/06	Finish hauling 09/11/06	Current		
Sea condition: Slight		Time 1535	Time 1638	Depth 10	Spd (kt) 2	Direction 211°
Gear		Latitude 09°00'.60 N	Latitude 08°59'.80 N			
Total hook no: 360		Longitude 108°45'.20 E	Longitude 108°44'.88 E	25	1.5	210°
No. hook/branch line 6	Memorandum:				50	1.3 192°
Immersion time: 4 hrs 31 min	Sea depth 112 m				Total catch in number: 14 pcs.	
Type of bait: squid	Total distance 0.6 nm cos 315°				Total catch in weight: 9.15 kg	
		Shooting speed 2.5 knot				

No.	Species	Number	Weight (kg)	Remarks
1	<i>Epinephelus areolatus</i>	2	1.00	
2	<i>Saurida undosquamis</i>	2	1.10	
3	<i>Nemipterus bathybius</i>	1	0.05	
4	<i>Trachinocephalus myops</i> (Snake fish)	3	0.30	
5	<i>Epinephelus octofasciatus</i>	1	2.00	
6	<i>Lagocephalus gloveri</i>	4	3.50	
7	<i>Apharus furca</i> (Small toothed jobfish)	1	1.20	
	Total	14.00	9.150	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.18



Recorded by Sayan Promjinda

Cruise No:22-6/2006		Name of Vessel				Air temp: 28.4 °C
Survey station No: 20		M.V.SEAFFDEC 2				Air pressure: 1013 mbar
Date: 10-Nov-06						Humidity : 80 %
Moon age: 19 phase 72		Start shooting 10/11/06		Finish shooting 10/11/06		Water
Wind		Time	0424	Time	0448	Surface temp: 28 °C
Spd (kt)	Direction	Latitude	08°14'.14N	Latitude	08° 14'.58 N	Bottom temp: N/R °C
10	030°	Longitude	108°48'.36E	Longitude	108°49.02 E	Thermocline : N/R
Weather cond: bc		Start hauling 10/11/06		Finish hauling 10/11/06		Current
Sea condition: Moderate		Time	0847	Time	0940	Depth
Gear		Latitude	08°11'.62 N	Latitude	08°11'.24 N	Spd (kt)
Total hook no: 450		Longitude	108°48'.87 E	Longitude	108°49'.17 E	Direction
No. hook/branch line 6		Memorandum:				50
Immersion time: 4 hrs 37 min		Sea depth 117 m				1.8
Type of bait: squid		Total distance 0.8 nm cos 050°				197°
		Shooting speed 2.0 knot				197°
						Total catch in number: 11 pcs.
						Total catch in weight: 13.8 kg

No.	Species	Number	Weight (kg)	Remarks
1	<i>Saurida elongata</i>	4	2.00	
2	<i>Epinephelus areolatus</i>	1	0.30	
3	<i>Mustelus griseus</i>	4	11.00	
4	<i>Lagocephalus gloveri</i>	1	0.30	
5	<i>Trachinocephalus myops</i>	1	0.20	
	Total	11.00	13.800	

BOTTOM VERTICAL LONGLINE FISHING LOGSHEET
Operation No.19



Recorded by Sayan Promjinda

Cruise No:22-6/2006	Name of Vessel				Air temp: 27.6 °C
Survey station No: 19	M.V.SEAFFDEC 2				Air pressure: 1014.5 mbar
Date: 10-Nov-06					Humidity : 85 %
Moon age: 19 phase 72	Start shooting 10/11/06	Finish shooting 10/11/06	Water		
Wind	Time	1140	Time	1201	Surface temp: 28.1 °C
Spd (kt)	Direction	Latitude	08°00'.60N	Latitude	08° 01'.20 N
10	030°	Longitude	108°39'.80 E	Longitude	108°40.20 E
Weather cond: bc	Start hauling 10/11/06	Finish hauling 10/11/06	Current		
Sea condition: Slight	Time	1600	Time	1715	Depth
Gear	Latitude	07°57'.10 N	Latitude	07°56'.06 N	Spd (kt)
Total hook no: 450	Longitude	108°37'.50 E	Longitude	108°36'.86 E	Direction
No. hook/branch line 6	Memorandum:				50
Immersion time:	Sea depth 109 m				1.9
4 hrs 28 min	Total distance 0.7 nm cos 034°				206°
Type of bait:	Shooting speed 2.0 knot				Total catch in number:
squid					19 pcs.
					Total catch in weight:
					9.5 kg

No.	Species	Number	Weight (kg)	Remarks
1	<i>Lagocephalus sceleratus</i> (Silverstripe blaasop)	1	4.00	
2	<i>Epinephelus areolatus</i> (Grouper)	3	0.90	
3	<i>Trachinocephalus myops</i> (Snake fish)	11	3.00	
4	<i>Saurida tumbil</i>	4	1.60	
	Total	19.00	9.500	