



CRUISE REPORT ON RESEARCH ACTIVITY

M.V.SEAFDEC 2 Cruise No. 20-4/2006

26 June– 18 July 2006

**Fisheries resource survey in the South China Sea of
Indonesia Water**

TD/RP/97

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 : MV SEAFDEC 2

Cruise no. : 20-4/2006

Duration : 26 June - 18 July 2006 (22 days)

Project Title : Research Survey in the South China Sea of Indonesia Water

Objective : To carry out the following research survey on:
1. Acoustic survey.
2. Oceanographic survey (including collection of Plankton, Sediment).
3. Demersal fish sampling by Bottom Trawl
4. Squid jigging

Covered water: South China Sea of Indonesia Water

Port of call : Pontianak and Ranai (BungaranIs.)

2. List of Personnel on board M.V.SEAFDEC2

M.V.SEAFDEC2 Personnel

No.	Position	Name
1	Captain	Mr. Tossaporn Sukhapindha
2	Chief Engineer	Mr. Veerachai Chettasumon
3	Second Officer	Mr. Suren Pruksarat
4	Third Officer	Mr. Somphote Vudhipanyo
5	Second Engineer	Mr. Nattapong Chaitanavisut
6	Fishing Assistant	Mr. Aussawin Buachauy
7	Boatswain	Mr. Vuthirat Vudhipanyo
8	Steersman	Mr. Pradit Kui-Prasert
9	Steersman	Mr. Sonkiet Phetrasatein
10	Able Seaman	Mr. Boonsom Prangthip
11	Fitter	Mr. Dum Tanyacharoen
12	Oiler	Mr. Plew Shodok
13	Oiler	Mr. Boontarin Wora-in
14	Oiler	Mr. Watchara Panasri
15	Ship's Cook	Mr. Saichol Kornnoom
16	Ship's Boy	Mr. Somsak Phangkumhuk

SEAFDEC researcher

1	Chief Scientist	Mr. Isara Chanrachkij
2	Researcher	Mr. Narong Raungsivakul
3	Researcher	Mr. Nakaret Yasook
4	Researcher	Mr. Sayan Promjinda
5	Assistant Researcher	Mr. Yuta Maruoka

Department of Fisheries Indonesia researcher

1	Chief Researcher	Mr. Wedjatmiko
2	Researcher	Mr. T.S. Murtoyo
3	Researcher	Mr. Naseer
4	Researcher	Mr. M.Taufik
5	Researcher	Mr. Agus Permono
6	Assistant Researcher	Mr. Budiman
7	Assistant Researcher	Mr. Amanf Edi Santoso
8	Assistant Researcher	Mr. Abdullah
9	Indonesian Navy Officer	Capt. Purwito

3. Daily activity

Date	Time	Activity	Remark
2 July 06	10:40-11:14	Oceanographic practice by ICTD and Bongo net at ST1	
	11:10-13:00	Operate Trawl-01 at ST1	Trawling time 1 hours
	13:29-16:29	Leave ST1 for ST2, conduct acoustic practice (30 nm)	
	16:35-17:03	Oceanographic practice by ICTD and Bongo net at ST2	
	17:07-20:24	Leave ST2 for ST3, conduct acoustic practice (30 nm)	
	20:30-22:30	Operate SQ-01 at ST3	
3 July 06	05:44-06:16	Oceanographic practice by ICTD and Bongo net at ST3	
	06:18-07:20	Trawl Operation at ST3 was cancelled because trawl net was struggled at muddy bottom and fishing position was on the navigation route of cargo vessels	
	07:44-10:47	Leave ST3 for ST4, conduct acoustic practice (30 nm)	
		Oceanographic practice by ICTD and Bongo net at ST4 was cancelled because rough sea	
	10:47-13:49	Leave ST4 for ST5, conduct acoustic practice (30 nm)	
	13:50-14:23	Oceanographic practice by ICTD and Bongo net at ST5	
	14:24-16:06	Operate Trawl-02 at ST5	Trawling time 1 hours
	16:43-19:46	Leave ST5 for ST9, conduct acoustic practice (30 nm)	

Date	Time	Activity	Remark
4 July 06	05:45-06:20	Oceanographic practice by ICTD and Bongo net at ST9	
	06:44-08:25	Operate Trawl-03 at ST9	Trawling time 1 hours
	08:47-11:30	Leave ST09 for ST10, conduct acoustic practice (30 nm)	
	11:54-12:24	Oceanographic practice by ICTD and Bongo net at ST10	
	12:28-15:25	Leave ST10 for ST11, conduct acoustic practice (30 nm)	
	15:29-15:56	Oceanographic practice by ICTD and Bongo net at St11	
	16:18-18:00	Operate Trawl-04 at ST11	Trawling time 1 hours
	18:21-20:19	Leave ST11 for ST12, conduct acoustic practice (19 nm)	
	20:24-22:02	Leave ST12 for ST13, conduct acoustic practice (16 nm)	
5 July 06	05:42-06:15	Oceanographic practice by ICTD and Bongo net at ST13	
	06:18-09:24	Leave ST13 for ST14, conduct acoustic practice (30 nm)	
	09:28-09:57	Oceanographic practice by ICTD and Bongo net at ST14	
	10:12-12:01	Operate Trawl-05 at ST14	Trawling time 55 minutes
	12:28-16:40	Leave ST14 for ST15, conduct acoustic practice (42 nm)	
	16:40-17:12	Oceanographic practice by ICTD and Bongo net at ST15	
	17:15-20:16	Leave ST15 for ST16, conduct acoustic practice (30 nm)	
6 July 06	05:39-06:13	Oceanographic practice by ICTD and Bongo net at ST16	
	06:30-07:36	Trawl Operation-06 at ST16 was stopped by the obstruction of local bottom gillnet	Trawling time 20 minutes
	07:53-10:55	Leave ST16 for ST17, conduct acoustic practice (30 nm)	
	12:00-13:00	Oceanographic practice by ICTD and Bongo net at ST17	
	11:33-14:32	Leave ST17 for ST18, conduct acoustic practice (30 nm)	
	14:35-15:02	Oceanographic practice by ICTD and Bongo net at ST18	
	15:22-16:40	Trawl Operation-07 at ST18 was cancelled. Otter board was struggled at clay/muddy bottom. Otter board was lost the balance and topography was not suitable	
	16:57-20:06	Leave ST18 for ST19, conduct acoustic practice (30 nm)	
	20:35-22:00	Operate SQ-02 at ST18	
7 July 06	05:40-06:13	Oceanographic practice by ICTD and Bongo net at ST19	

Date	Time	Activity	Remark
7 July 06	06:15-09:19	Leave ST19 for ST20, conduct acoustic practice (30 nm)	
	09:23-09:52	Oceanographic practice by ICTD and Bongo net at ST20	
	10:00-12:13	Operate Trawl-08 at ST20. Trawl net struggle at the soft muddy bottom.	Trawling time 40 minutes
	12:55-15:56	Leave ST20 for ST25 conduct acoustic practice (30 nm)	
	16:00-16:30	Oceanographic practice by ICTD and Bongo net at ST21	
		Trawl Operation at ST25 was cancelled. Survey area was too close to oil platform and there are many oil wells and pipes spread in the survey area	
	16:37-19:40	Leave ST25 for ST26, conduct acoustic practice (30 nm)	
	20:20-23:00	Operate SQ-03 at ST26	
8 July 06	05:45-06:21	Oceanographic practice by ICTD and Bongo net at ST26	
	06:26-09:37	Leave ST26 for ST27, conduct acoustic practice (30 nm)	
	09:40-10:22	Oceanographic practice by ICTD and Bongo net at ST27	
		Trawl Operation at ST27 was cancelled. Net was struggled at muddy bottom and sea condition was not suitable for operation.	
	11:51-14:54	Leave ST27 for ST33, conduct acoustic practice (30 nm)	Adjusted time zone in computer of FQ-80
	15:00-15:34	Oceanographic practice by ICTD and Bongo net at ST33	
	15:35-17:25	Operate Trawl-09 at ST33	Trawling time 1 hours
	17:55-20:58	Leave ST33 for ST32, conduct acoustic practice (30 nm)	
9 July 06	05:54-06:12	Oceanographic practice by ICTD and Bongo net at ST32	
	06:18-09:17	Leave ST32 for ST31, conduct acoustic practice (30 nm)	
	09:20-09:52	Oceanographic practice by ICTD and Bongo net at ST31	
	10:10-12:00	Operate Trawl-10 at ST31	Trawling time 1 hours
	12:19-15:19	Leave ST31 for ST28, conduct acoustic practice (30 nm)	
	15:22-15:53	Oceanographic practice by ICTD and Bongo net at ST28	
	15:58-18:51	Leave ST28 for ST29, conduct acoustic practice (30 nm)	
	19:38-22:30	Operate SQ-04 at ST28	
10 July 06	05:57-06:16	Oceanographic practice by ICTD and Bongo net at ST29	
	06:20-08:17	Operate Trawl-11 at ST29	Trawling time 1 hours

Date	Time	Activity	Remark
	08:58-11:58	Leave ST29 for ST30, conduct acoustic practice (30 nm)	
	12:01-12:33	Oceanographic practice by ICTD and Bongo net at ST30	
	12:36-15:40	Leave ST30 for ST31, conduct acoustic practice (30 nm)	
	15:40-18:39	Leave ST31 for ST41, conduct acoustic practice (30 nm)	
		<i>Operate SQ-04 at ST41 was cancelled because of rough sea and full moon period</i>	
11 July 06	05:43-06:20	Oceanographic practice by Depth and Temperature recorder and Bongo net at ST41. ICTD was cancelled because of rough sea condition	
	06:40-08:30	Trawl Operation-12 at ST41 was stopped because net was struggled at muddy bottom	Trawling time 30 minutes
	08:45-11:50	Leave ST41 for ST40, conduct acoustic practice (30 nm)	
	11:54-12:39	Oceanographic practice by Depth and Temperature recorder and Bongo net at ST40. ICTD was cancelled because of rough sea condition	
	12:41-16:08	Leave ST40 for ST39, conduct acoustic practice (30 nm)	
	16:14-16:50	Oceanographic practice by Depth and Temperature recorder and Bongo net at ST39. CTD was cancelled because of rough sea condition	
		Operation of Trawl at ST39 was cancelled because of rough sea condition	
	16:54-20:20	Leave ST39 for ST38, conduct acoustic practice (30m)	
		Operate SQ-05 at ST38 was cancelled because of rough sea and full moon period	
12 July 06	06:00-07:00	Oceanographic practice by ICTD and Bongo net at ST38	
	06:22-09:30	Leave ST38 for ST37, conduct acoustic practice (30 nm)	
	06:14-09:30	Oceanographic practice by TD and Bongo net at ST37	
		Operation of Trawl at ST37 was cancelled because of rough sea condition	
	10:23-15:41	Leave ST37 for ST34, conduct acoustic practice (42 nm)	Hydroacoustic survey track station 37 to 36 was cancelled because of very strong pitching rough sea condition.
	15:45-16:10	Oceanographic practice by TD at ST34 Plankton survey by Bongo net was cancelled because rough sea condition	

Date	Time	Activity	Remark
	16:11-19:27	Leave ST34 for ST33, conduct acoustic practice (30 nm)	
	19:27-24:00	Proceed to Port of Ranai, finish activities	

Oceanographic survey 30 stations

Trawl operation 12 operations

Squid jigging 4 stations

Acoustic route 33 tracks

4. Observation summary

Affected by the retardation of MGO (Marine Gas Oil) bunkering at Port of Pontianak, the departure schedule has been delayed for 3 days, from 29 June 2006 to be 1 July 2006. The research plan has been adjusted under the agreement among Indonesia scientist and SEAFDEC scientist. The research stations and activities was adopted to reduce from 41 oceanographic survey stations, 22 Bottom trawl operations, 40 Hydroacoustic tracks and 6 squid jigging operations to be 34 Oceanographic survey stations, 12 Bottom trawl operations, 33 hydroacoustic tracks and 4 squid jigging operations. The positions of all adopted stations are shown by table and chart below;

Table1: Adopted survey station

Station No.	Position	Activity
1	Latitude 02°30'.00N Longitude 108°30'.00 E	Oceanographic, Trawl and Hydroacoustic
2	Latitude 02°30'.00N Longitude 108°00'.00 E	Oceanographic and Hydroacoustic
3	Latitude 02°30'.00N Longitude 107°30'.00 E	Oceanographic, Trawl, Hydroacoustic and jigging
4	Latitude 02°30'.00N Longitude 107°00'.00 E	Oceanographic and Hydroacoustic
5	Latitude 02°30'.00N Longitude 106°30'.00 E	Oceanographic, Trawl and Hydroacoustic
9	Latitude 03°00'.00N Longitude 106°30'.00 E	Oceanographic, Trawl and Hydroacoustic
10	Latitude 03°00'.00N Longitude 107°00'.00 E	Oceanographic and Hydroacoustic
11	Latitude 03°00'.00N Longitude 107°30'.00 E	Oceanographic, Trawl and Hydroacoustic
13	Latitude 03°00'.00N Longitude 108°00'.00 E	Oceanographic and Hydroacoustic
14	Latitude 03°00'.00N Longitude 108°30'.00 E	Oceanographic, Trawl and Hydroacoustic
15	Latitude 03°00'.00N Longitude 109°00'.00 E	Oceanographic and Hydroacoustic
16	Latitude 03°30'.00N Longitude 108°30'.00 E	Oceanographic, Trawl and Hydroacoustic
17	Latitude 03°30'.00N Longitude 108°00'.00 E	Oceanographic and Hydroacoustic
18	Latitude 03°30'.00N Longitude 107°30'.00 E	Oceanographic, Trawl, Hydroacoustic and jigging
19	Latitude 03°30'.00N Longitude 107°00'.00 E	Oceanographic and Hydroacoustic
20	Latitude 03°30'.00N Longitude 106°30'.00 E	Oceanographic, Trawl and Hydroacoustic
25	Latitude 04°00'.00N Longitude 106°30'.00 E	Oceanographic, Trawl and Hydroacoustic
26	Latitude 04°00'.00N Longitude 107°00'.00 E	Oceanographic and Hydroacoustic
27	Latitude 04°00'.00N Longitude 107°30'.00 E	Oceanographic, Trawl and Hydroacoustic
33	Latitude 04°30'.00N Longitude 107°30'.00 E	Oceanographic, Trawl and Hydroacoustic
32	Latitude 04°30'.00N Longitude 108°00'.00 E	Oceanographic and Hydroacoustic
31	Latitude 04°30'.00N Longitude 108°30'.00 E	Oceanographic, Trawl and Hydroacoustic
28	Latitude 04°00'.00N Longitude 108°30'.00 E	Oceanographic and Hydroacoustic
29	Latitude 04°00'.00N Longitude 109°00'.00 E	Oceanographic, Trawl, Hydroacoustic and jigging

30	Latitude 04°30'.00N Longitude 109°30'.00 E	Oceanographic and Hydroacoustic
41	Latitude 05°00'.00N Longitude 108°30'.00 E	Oceanographic, Trawl, Hydroacoustic and jigging
40	Latitude 05°00'.00N Longitude 108°00'.00 E	Oceanographic and Hydroacoustic
39	Latitude 05°00'.00N Longitude 107°30'.00 E	Oceanographic, Trawl and Hydroacoustic
38	Latitude 05°00'.00N Longitude 107°00'.00 E	Oceanographic, Hydroacoustic and jigging
37	Latitude 05°00'.00N Longitude 106°30'.00 E	Oceanographic, Trawl and Hydroacoustic
35	Latitude 04°30'.00N Longitude 106°30'.00 E	Oceanographic, Trawl and Hydroacoustic
34	Latitude 04°30'.00N Longitude 107°00'.00 E	Oceanographic and Hydroacoustic

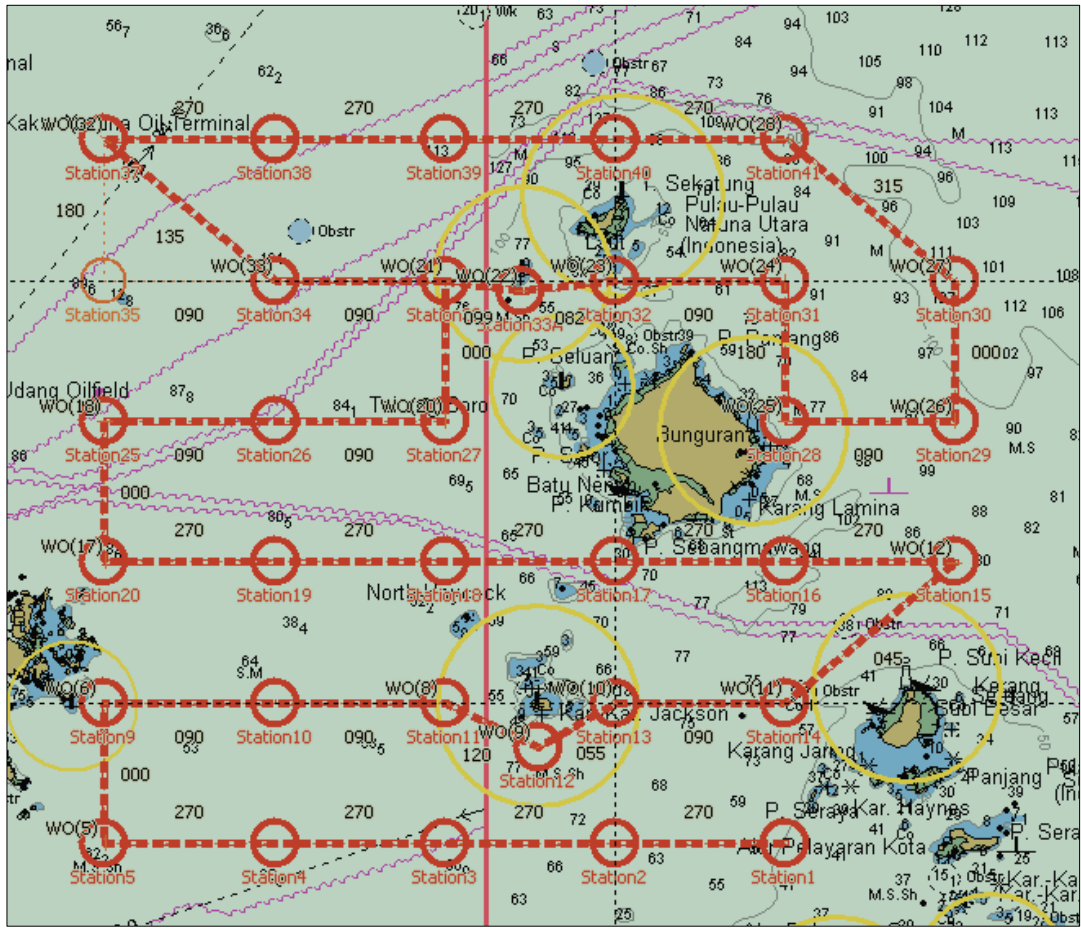


Figure1: Chart of survey station

Table 2. Partial detail of oceanographic station

Station No.	Date	Time (Local)	Position		Depth (m)	Oceanographic survey						Remark
			Latitude	Longitude		ICTD	TSG	Plankton survey		Transparency (m)	Color No.	
								Bongo net	Larvae net			
1	2/07/2006	1040	02°03'09 N	108°30'10 E	49.6	√	√	√	-	8	3	
2		1635	02°29'83 N	107°59'90 E	74.0	√	√	√	-	22	5	
3	3/07/2006	0544	02°30'05 N	107°30'10 E	76.0	√	√	√	-	-	-	
4												Cancelled
5		1350	02°29'92 N	108°30'10 E	64.0	√	√	√	-	17	4	
9	4/07/2006	0545	03°00'22 N	106°30'28 E	65.0	√	√	√	-	-	-	
10		1154	02°59'90 N	107°00'46 E	73.0	√	√	√	-	18	4	
11		1529	02°59'95 N	107°30'30 E	68.0	√	√	√	-	20	4	
13	5/07/2006	0542	03°00'08 N	108°00'27 E	84.0	√	√	√		-	-	
14		0928	02°59'95 N	108°30'39 E	80.0	√	√	√		14	5	
15		1640	03°30'02 N	109°00'44 E	84.0	√	√	√		25	4	
16	6/07/2006	0539	03°29'94 N	109°30'10 E	103.0	√	√	√		-	-	
17		1059	03°30'00 N	108°00'15 E	111.0	√	√	√		20	3	
18		1435	03°29'96 N	107°30'14 E	70.0	√	√	√		18	4	
19	7/07/2006	0540	03°29'88 N	107°00'15 E	81.0	√	√	√		-	-	
20		0923	03°30'08 N	106°30'10 E	80.0	√	√	√		20	4	
25		1600	04°30'08 N	106°30'40 E	89.0	√	√	√		21	4	
26	8/07/2006	0545	04°00'01 N	106°30'40 E	92.0	√	√	√		-	-	
27		0940	03°59'39 N	107°30'40 E	75.0	-	√	√		13	3	Depth-Temp sensor
33		1500	04°30'69 N	107°30'32 E	95.0	√	√	√		15	4	
32	9/07/2006	0544	04°29'78 N	107°59'80 E	46.0	√	√	√		-	-	
31		0920	04°29'87 N	108°30'40 E	88.0	√	√	√		20	4	
28		1522	03°59'80 N	108°30'20 E	74.0	√	√	√		20	4	
29	10/07/2006	0547	03°59'81 N	109°00'09 E	97.0	√	√	√		-	-	
30		1201	04°30'11 N	109°00'28 E	1090	√	√	√		15	3	
41	11/07/2006	0543	05°00'01 N	108°30'16 E	99.0	√	√	√		-	-	
40		1154	05°00'00 N	108°00'00 E	111.0	-	√	√		13	3	Depth-Temp sensor
39		1614	04°59'94 N	107°30'00 E	88.0	-	√	√		19	3	Depth-temp sensor
38	11/07/2006	0543	04°59'89 N	106°59'85 E	75.0	√	√	√		-	-	
37		0940	05°00'10 N	106°29'98 E	68.0	-	√	√		18	3	Depth-Temp sensor
34		1545	04°59'98 N	107°30'37 E	98.0	-	√	-		16	3	Depth-Temp sensor

The hydro-acoustic Survey by using Scientific Echosounder (Furuno, FQ-80) in the South China sea of Indonesia waters during 26 June – 18 July 2006 follows the cruise order number M.V. SEAFDEC 2 No. 20-4/2006. The calibration of the equipment was not done before surveying because the limit of the time. The depth of survey was set from 0 – 90 meters with depth interval 5 meters. All together 34 tracks have been surveyed by using ship speed 8 – 10 knots up to the sea condition. The survey data of hydro-acoustic were backed up into DVD disc (3 discs) and gave to the DOF of Indonesia one copy and another one for SEAFDEC/TD.

During the survey the sea condition was not good, so there wear a lot of lost data when the sea condition moderate and rough sea. There are some remarks for this survey as follows:

1. Should provide the time for calibration the equipment at least one day.
2. The survey speed did not fix at 10 knots when planning the survey but the range should be 7 – 10 knots.
3. The time of recording data after analyze is faster than the real time about 30 minutes from, but after the document ID as 783 this problem was solved by set the time zone to “GMT +6:30 (Rangoon)”. Please check the time in the table of FQ-80 log book.
4. The other information is in the table of FQ-80 log book.