

付属資料 5 : コンサルティング・サービス

5-1. 作業スケジュール表

STEP	2014					2015					2016					2017					2018																																							
	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8																				
Project Implementation	① Detail Design Stage																				② Tendering Stage																				③ Construction Stage (continued)																			
1. Project Manager	-----																				-----																				-----																			
2. Assist. Project Manager & Tender Docu. Specialist	-----																				-----																				-----																			
3. Naval Architect (Manager of Design Team)	-----																				-----																				-----																			
4. Hull Structure & Fitting Design	-----																				-----																				-----																			
5. Machinery Fitting Design	-----																				-----																				-----																			
6. Electric Fitting Design	-----																				-----																				-----																			
7. Fishing Gear & Machinery Design	-----																				-----																				-----																			
8. Survey Equipment Study & Evaluation	-----																				-----																				-----																			

STEP	2018					2019					2020					Man-Month																																												
	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	Morocco	Abroad	Total																																				
Project Implementation	② Construction Stage																				③ Delivery																																							
1. Project Manager	-----																				-----																				-----																			
2. Assist. Project Manager & Tender Docu. Specialist	-----																				-----																				-----																			
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7. Fishing Gear & Machinery Design	-----																				-----																				-----																			
8. Survey Equipment Study & Evaluation	-----																				-----																				-----																			
																				Total(m.m)																				32.50 103.70 136.20																				

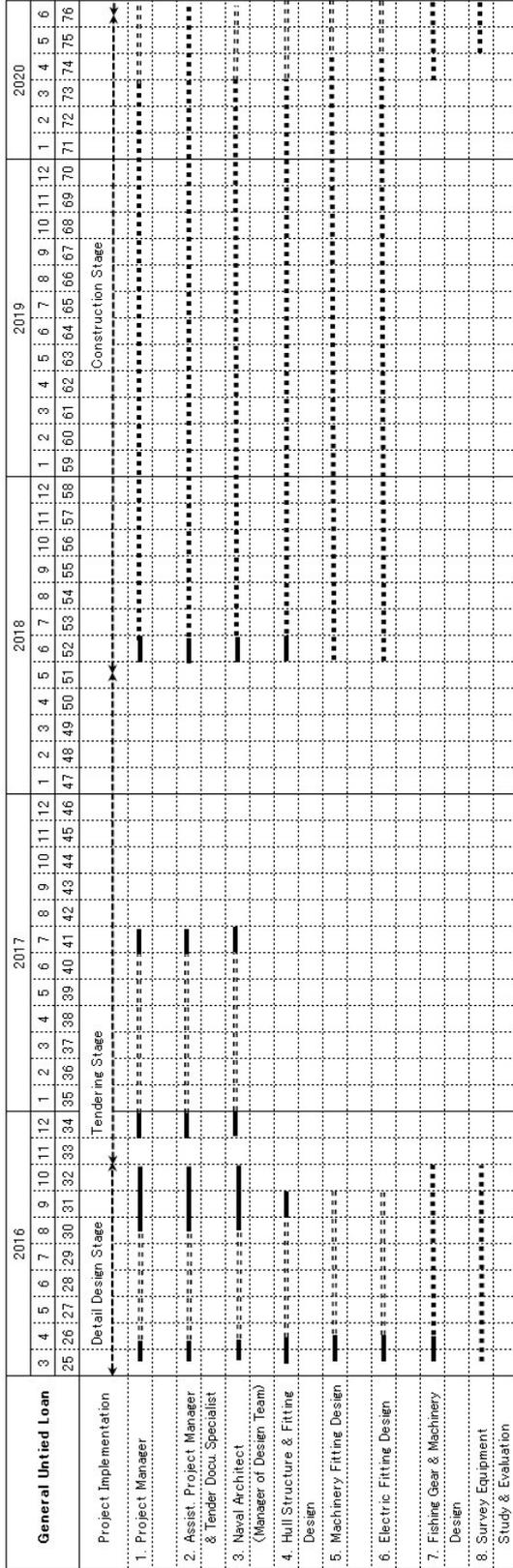
Note:

----- continuous work in Morocco

----- intermittent work in Morocco

----- continuous work abroad

----- intermittent work abroad



Note:

- continuous work in Morocco
- ▨ intermittent work in Morocco
- ===== continuous work abroad
- ▨ intermittent work abroad

General United Loan (continued)	2020												Man-Month			
	6	7	8	9	10	11	12	6	7	8	9	10	11	12	Moro-cco	Abroad
Project Implementation	Delivery															
1. Project Manager	=====												9.50	19.25	28.75	
2. Assist. Project Manager & Tender Docu. Specialist	=====												8.50	13.75	22.25	
3. Naval Architect (Manager of Design Team)	=====												8.50	21.35	29.85	
4. Hull Structure & Fitting Design	=====												3.00	14.95	17.95	
5. Machinery Fitting Design	=====												1.00	14.40	15.40	
6. Electric Fitting Design	=====												1.00	14.40	15.40	
7. Fishing Gear & Machinery Design	=====												1.00	2.85	3.85	
8. Survey Equipment	=====												0.00	2.85	2.85	
Study & Evaluation	=====															
Total(m·m)													32.50	103.70	136.20	

5-2. コンサルタント費の内訳

1) STEP(Detail Design Stage)

	Man-Month		Labour Cost		Travel Expenses in Morocco			Air Fare Tokyo/Casablanca			Travel Expenses(Supervision at Shipyard)			Domestic Travel Fee (Train/Bus)					
	Morocco (m·m)	Abroad (m·m)	Total (m·m)	Billing Rate (¥1,000/m·m)	Amount (¥1,000)	Allowance (¥1,000/d)	Hotel (¥1,000/d)	Duration (m·mx30)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)	Allowance (¥1,000/d)	Hotel (¥1,000/d)	Duration (days)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)
1. Project Manager	3.50	4.00	7.50	2562.000	19,215.000	4,500	13,500	105.0	1,890.000	724.000	2	1,448.000	2,200	11,000	0	0.000		0	0.000
2. Assist. Project Manager & Tender Docu. Specialist	3.50	4.00	7.50	2562.000	19,215.000	3,800	11,600	105.0	1,617.000	724.000	2	1,448.000	2,200	11,000	0	0.000		0	0.000
3. Naval Architect & Manager of Design Team	3.50	4.00	7.50	2562.000	19,215.000	4,500	13,500	105.0	1,890.000	724.000	2	1,448.000	2,200	11,000	0	0.000		0	0.000
4. Hull Structure & Fitting Design	2.00	4.50	6.50	2562.000	16,653.000	3,800	11,600	60.0	924.000	724.000	2	1,448.000	2,200	11,000	0	0.000		0	0.000
5. Machinery Fitting Design	1.00	5.50	6.50	2562.000	16,653.000	3,800	11,600	30.0	462.000	724.000	1	724.000	2,200	11,000	0	0.000		0	0.000
6. Electric Fitting Design	1.00	5.50	6.50	2562.000	16,653.000	3,800	11,600	30.0	462.000	724.000	1	724.000	2,200	11,000	0	0.000		0	0.000
7. Fishing Gear & Fishing Machinery Design	1.00	1.95	2.95	2562.000	7,557.900	3,800	11,600	30.0	462.000	724.000	1	724.000	2,200	11,000	0	0.000		0	0.000
8. Survey Equipment Study & Evaluation	0.00	2.25	2.25	2562.000	5,764.500	3,800	11,600	0.0	0.000	724.000	0	0.000	2,200	11,000	0	0.000		0	0.000
TOTAL	15.50	31.70	47.20		120,926.400			465	7,707.000		11	7,964.000				0.000		0	0.000

2) STEP(Tendering, Construction and Delivery Stage)

	Man-Month		Labour Cost		Travel Expenses in Morocco			Air Fare Tokyo/Casablanca			Travel Expenses(Supervision at Shipyard)			Domestic Travel Fee (Train/Bus)					
	Morocco (m·m)	Abroad (m·m)	Total (m·m)	Billing Rate (¥1,000/m·m)	Amount (¥1,000)	Allowance (¥1,000/d)	Hotel (¥1,000/d)	Duration (m·mx30)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)	Allowance (¥1,000/d)	Hotel (¥1,000/d)	Duration (days)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)
1. Project Manager	6.00	15.25	21.25	2562.000	54,442.500	4,500	13,500	180.0	3,240.000	724.000	4	2,896.000	3,000	15,000	45	810.000	50.000	6	300.000
2. Assist. Project Manager & Tender Docu. Specialist	5.00	9.75	14.75	2562.000	37,789.500	3,800	11,600	150.0	2,310.000	724.000	4	2,896.000	3,000	15,000	30	540.000	50.000	4	200.000
3. Naval Architect & Manager of Design Team	5.00	17.35	22.35	2562.000	57,260.700	4,500	13,500	150.0	2,700.000	724.000	4	2,896.000	3,000	15,000	45	810.000	50.000	6	300.000
4. Hull Structure & Fitting Design	1.00	10.35	11.35	2562.000	29,078.700	3,800	11,600	30.0	462.000	724.000	1	724.000	3,000	15,000	45	810.000	50.000	6	300.000
5. Machinery Fitting Design	0.00	8.90	8.90	2562.000	22,801.800	3,800	11,600	0.0	0.000	724.000	0	0.000	3,000	15,000	40	720.000	50.000	4	200.000
6. Electric Fitting Design	0.00	8.90	8.90	2562.000	22,801.800	3,800	11,600	0.0	0.000	724.000	0	0.000	3,000	15,000	40	720.000	50.000	4	200.000
7. Fishing Gear & Fishing Machinery Design	0.00	0.90	0.90	2562.000	2,305.800	3,800	11,600	0.0	0.000	724.000	0	0.000	3,000	15,000	20	360.000	50.000	1	50.000
8. Survey Equipment Study & Evaluation	0.00	0.60	0.60	2562.000	1,537.200	3,800	11,600	0.0	0.000	724.000	0	0.000	3,000	15,000	20	360.000	50.000	1	50.000
TOTAL	17.00	72.00	89.00		228,018.000			510	8,712.000		13	9,412.000			285.000	5,130.000		32	1,600.000

1) GENERAL UNTIED(Detail Design Stage)

	Man-Month			Labour Cost			Travel Expenses in Morocco			Air Fare Tokyo/Casablanca			Travel Expenses(Supervision at Shipyard)			Europe Travel Fee(Train/Bus)			
	Morocco (m.m)	Abroad (m.m)	Total (m.m)	Billing Rate (¥1,000/m.m)	Amount (¥1,000)	Allowance (¥1,000/d)	Hotel (¥1,000/d)	Duration (m.mx30)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)	Hotel (¥1,000/d)	Duration (days)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)	
1. Project Manager	3.50	4.00	7.50	2562.000	19,215.000	4,500	13,500	105.0	1,890.000	724,000	2	1,448,000	4,500	13,500	0	0,000	50,000	0	0,000
2. Assist. Project Manager & Tender Docu. Specialist	3.50	4.00	7.50	2562.000	19,215.000	3,800	11,600	105.0	1,617.000	724,000	2	1,448,000	3,800	11,600	0	0,000	50,000	0	0,000
3. Naval Architect & Manager of Design Team	3.50	4.00	7.50	2562.000	19,215.000	4,500	13,500	105.0	1,890.000	724,000	2	1,448,000	4,500	13,500	0	0,000	50,000	0	0,000
4. Hull Structure & Fitting Design	2.00	4.50	6.50	2562.000	16,653.000	3,800	11,600	60.0	924.000	724,000	2	1,448,000	3,800	11,600	0	0,000	50,000	0	0,000
5. Machinery Fitting Design	1.00	5.50	6.50	2562.000	16,653.000	3,800	11,600	30.0	462.000	724,000	1	724,000	3,800	11,600	0	0,000	50,000	0	0,000
6. Electric Fitting Design	1.00	5.50	6.50	2562.000	16,653.000	3,800	11,600	30.0	462.000	724,000	1	724,000	3,800	11,600	0	0,000	50,000	0	0,000
7. Fishing Gear & Fishing Machinery Design	1.00	1.95	2.95	2562.000	7,557.900	3,800	11,600	30.0	462.000	724,000	1	724,000	3,800	11,600	0	0,000	50,000	0	0,000
8. Survey Equipment Study & Evaluation	0.00	2.25	2.25	2562.000	5,764.500	3,800	11,600	0.0	0.000	724,000	0	0,000	3,800	11,600	0	0,000	50,000	0	0,000
TOTAL	15.50	31.70	47.20		120,926.400			465	7,707.000		11	7,964.000		0.000	0.000			0	0.000

2) GENERAL UNTIED(Tendering, Construction and Delivery Stage)

	Man-Month			Labour Cost			Travel Expenses in Morocco			Air Fare Tokyo/Casablanca&Europe			Travel Expenses(Supervision at Shipyard)			Europe Travel Fee(Train/Bus)			
	Morocco (m.m)	Abroad (m.m)	Total (m.m)	Billing Rate (¥1,000/m.m)	Amount (¥1,000)	Allowance (¥1,000/d)	Hotel (¥1,000/d)	Duration (m.mx30)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)	Hotel (¥1,000/d)	Duration (days)	Amount (¥1,000)	Round Ticket (¥1,000/t)	Times	Amount (¥1,000)	
1. Project Manager	6.00	15.25	21.25	2562.000	54,442.500	4,500	13,500	180.0	3,240.000	724,000	8	5,792,000	3,000	15,000	60	1,080,000	50,000	4	200,000
2. Assist. Project Manager & Tender Docu. Specialist	5.00	9.75	14.75	2562.000	37,789.500	3,800	11,600	150.0	2,310.000	724,000	7	5,068,000	3,000	15,000	50	900,000	50,000	3	150,000
3. Naval Architect & Manager of Design Team	5.00	17.35	22.35	2562.000	57,260.700	4,500	13,500	150.0	2,700.000	724,000	8	5,792,000	3,000	15,000	60	1,080,000	50,000	4	200,000
4. Hull Structure & Fitting Design	1.00	10.35	11.35	2562.000	29,078.700	3,800	11,600	30.0	462.000	724,000	4	2,896,000	3,000	15,000	50	900,000	50,000	3	150,000
5. Machinery Fitting Design	0.00	8.90	8.90	2562.000	22,801.800	3,800	11,600	0.0	0.000	724,000	3	2,172,000	3,000	15,000	50	900,000	50,000	3	150,000
6. Electric Fitting Design	0.00	8.90	8.90	2562.000	22,801.800	3,800	11,600	0.0	0.000	724,000	3	2,172,000	3,000	15,000	50	900,000	50,000	3	150,000
7. Fishing Gear & Fishing Machinery Design	0.00	0.90	0.90	2562.000	2,305.800	3,800	11,600	0.0	0.000	724,000	1	724,000	3,000	15,000	20	360,000	50,000	1	50,000
8. Survey Equipment Study & Evaluation	0.00	0.60	0.60	2562.000	1,537.200	3,800	11,600	0.0	0.000	724,000	1	724,000	3,000	15,000	20	360,000	50,000	1	50,000
TOTAL	17.00	72.00	89.00		228,018.000			510	8,712.000		25	25,340.000		360.000	6,480.000			22	1,100.000

付属資料 6. 事業費及び運航・運営/維持管理費の試算

6-1. 建造費の内訳（本邦建造の場合）

		Plan-A	Plan-B
A. Manufacturing Costs (a+b)		4,438,856	3,663,417
a. Direct Production Costs		3,728,979	3,131,779
(1) Material Costs		379,614	281,902
1) Direct Material Costs		348,507	258,779
a. Hull Structure Part		123,100	92,870
b. Hull Fitting Part		132,669	96,503
c. Machinery Part		48,372	36,270
d. Electric Part		44,366	33,136
2) Auxiliary Material Costs		31,107	23,123
(2) Equipment Costs		2,562,424	2,249,594
1) Hull Part		284,150	204,009
2) Machinery Part		639,313	510,911
3) Electric Part		415,073	369,502
4) Survey Equipment		738,536	699,618
4) Fishing Equipment		485,352	465,554
(3) Labour Cost		618,108	453,566
(4) Painting Man-hour Cost		39,375	35,437
(5) Direct Cost		129,458	111,280
1) Docking Expenses		10,769	8,057
2) Class Inspection Cost		10,000	10,000
3) Sea Trial Expenses		71,789	56,323
4) Special Expenditure		36,900	36,900
b. Indirect Production Costs		709,877	531,638
(1) Indirect Labour Cost		282,215	208,232
(2) Factory and administrative expenses		427,662	323,406

(2) Breakdown of Equipment Cost for Plan-A (1,100G/T)

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8. Hull Part

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Steering Gear	1	rotary vane type, torque 149.5kN-m	15,525
Bow Thruster	1	electric, CPP, thrust 39.2kN, 195kW	18,000
Windlass	2	1CD-2HD-1WE, 44.1kN x 12m/min	20,104
Mooring Winch	2	1HD-1WE, 29.4kN x 15m/min	9,256
Mooring Equipment	1 set	Bollard, Fair-leader, Mooring pipe	2,536
Wharf Ladder	1	aluminum, length 5.0m x breadth 0.6m	400
Bulwark Ladder	1	breadth 0.6m	408
Pilot Ladder	2		160
Flash Hatch	1	hyd. cylinder driven, size 1.80m x 1.30m	2,400
Life Laft	6	inflatable, class A, 20 persons	4,320
Rescue Boat	1	FRP, 6 persons, Length 4.36m,	2,880
Rescue Boat Davit	1	single boom slewing type, 7.5kW	3,360
Lifebuoy	8		151
Life Jacket	46	inflatable, with lifejacket light	626
Life Vest	29		581
Immersion Suit	44		1,338
Line-throwing App.	1		144
Signals	1 set		316
Work Boat	1	FRP/rubber, 8 persons, Length 4.90m,	3,638
Work Boat Davit	1	single boom slewing type, 1.5kW	2,700
Fire Detecting System	1 set	Heat and smoke detector system	3,040
Emergency fire pump	1	25m ³ /hX40mX11kW	560
Fire Hydrant	1 set		71
Fire Extinguisher	1 set	Portable extinguisher, Fireman's Outfit, EEBD	1,084
Fixed CO2 Fire-extinguishing	1 set	for engine room	1,080
Deck Bilge Pump	1	1.8m ³ /h×18m	128
Square Window	18	for wheelhouse, with window wiper	11,451
Round Windows	18	φ 300mm	1,377
Square Window	19	350×550mm	2,052
Mechanical Fan	7		1,844
Accommodation Work	1 set		131,257
Anti Rolling Tank	1 set	semi active type	8,800
Table with Exhaust Fan	1		900
Disposer	2		1,168
Household Appliances	1 set		3,043
Cooking Range	1	electric 35kW	2,295
Rice Cooker	2	6L	1,920
Tilting Brazing Pan	1	electric 9kW, 50L	1,011
Water Boiler	1	electric 3kW, 30L	183

Equipment	Q'ty	Particulars	Cost
Refrigerator	1	1500L	1,207
Disposer	1	15kg/min, 2.2kW	583
Ice Maker	1	38kg/day	440
Air Towel	1		40
Galley Equipment	1 set		1,109
Kitchen Supplies	1 set		3,520
Bath Equipment	1		375
Bow Anchor	2	AC14 high holding type, 968kg	272
Anchor Chain Cable	1 set	galvanized, dia.32mm x 385m	1,456
Mooring Line	1 set		2,845
Deck Inventory	1 set		10,640
Air Fender	2	rubber, dia. 1.0m x length 1.50m	2,400
Fender	4	φ500mm×1200mm	320
Total (Hull Part)			287,314

9. Machinery Part

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Main Engine & Propeller	1	1,885kW×750min ⁻¹ , 4CPPX2,700 φ	210,000
FO Purifier	1		4,400
LO Purifier for M/E	1	0.6m ³ /h, CJCfilter,	6,080
Low Temp. FW cooler	2		6,642
High Temp. FW cooler	2		900
Main Generator Engine	2	Rated output: 441kW×1000min ⁻¹	75,000
Emergency Generator Engine	1	Rated output: 50kW×1500min ⁻¹	5,400
Harbour Use Gene. Engine	1		13,500
Hot Water Boiler	1	Heat output : 233kW, Burner moter, Gas oil	8,730
Calorifire	1	5m ³ /h	495
Main Air Compressor	2	Air discharge volume: 30m ³ /h×7.5kW	4,230
Main Air Vessel	2		1,592
Aux. Air Vessel	1		696
Hyd. Pump Unit	1 set		49,128
Fresh Water Generator	1	10t/day, Plate type Titan plate	6,642
Fresh Water Generator	1	5t/day, Reverse osmosis type	5,265
Bilge Alarm	1 set		1,600
Water Level Gauge	1 set		5,925
Air Conditioning Unit	1 set		39,870
Smoke Separator	2	for smoker	1,080
Ref. Machine for F/H	1 set		19,200
Sewage Treatment Device	1	40 persons, discharge pump 1.5kW x 2	8,131
Sewage Collecting Tank	1	250L, sewage transfer pump 1.5kW	1,600

Equipment	Q'ty	Particulars	Cost
Main Cooling SW Pump	2	Centrifugal (1set stand-by)	1,700
M/E Stand-by HTCFW Pump	1	Centrifugal	420
M/E Stand-by LO Pump	1	Gear	1,340
M/E Stand-by FO Supply	1	Gear	400
R/G Stand-by LO Pump	1	Gear	320
R/G Clutch Oil Pump	1	Gear	390
R/G Stand-by Clutch Oil Pump	1	Gear	260
LT Cooling FW Pump	3	Centrifugal (1set stand-by)	1,260
Bilge and Fire Pump	1	65/30m ³ /hX25/45mX15kW	2,304
G. Service and Fire Pump	1	65/30m ³ /hX25/45mX15kW	2,304
Sanitary Pump	2	30m ³ /hX28mX2.2kW	528
FW Transfer Pump	1	10m ³ /hX35mX3.7kW	470
FW Service Pump	1	8m ³ /hX48mX2.2kW(potable water)	461
Distilled FW Service Pump	1	8m ³ /hX48mX2.2kW	461
HW Circulating Pump	2	5m ³ /hX25mX1.5kW	672
HTW Circulating Pump	2	30m ³ /hX20mX3.7kW	672
Bilge Pump(O/W separat)	1	0.5m ³ /hX 0.3MPaX 0.4kW	461
Waste Oil Transfer Pump	1	2m ³ /hX 0.4MPaX 1.5kW	663
FO Transfer Pump	1	10m ³ /hX 0.3MPaX3.7kW	346
FO Service Pump	1	2m ³ /hX0.25MPaX0.75kW	279
LO Transfer Pump	1	1m ³ /hX0.25MPaX0.75kW	202
Gray Water Transfer Pump	2	8m ³ /hX40mX3.7kW	653
Anchoring LTCFW Pump	1	Centrifugal	320
Labo. Sea Water Pump	1		600
Sea Water Pump for OPCS	1		450
Portable Pump	2		48
Marine Growth Prevention Eq.	2		3,240
Drink Water Sterilizer	1		3,600
Oily Water Separator	1	0.5m ³ /h (15ppm)	1,024
Flow Meter	1 set		2,400
E/R Supply Ventilation Fan	2	450/300m ³ /hX5.5/2.75kW	3,420
E/R Exhaust Ventilation Fan	1	200/130m ³ /hX2.2/0.75kW	393
Dehumidification Equipment	1	25 Nm ³ /m ³ ×0.69MPa	576
Transceiver	5		135
Workshop Equipment	1 set		4,160
Machinery Part Spare Parts	1 set		10,256
Propulsion Control Console	1		7,200
Winch Control Console	1		3,240
Engine Control Console	1		16,650
Engine Side Panel	1		2,700

Equipment	Q'ty	Particulars	Cost
Engine Control Room Equip.	1		640
Engine Data Logger System	1		45,000
Engine Telegraph	1		4,500
Spare Parts Maintenance Control system	1		13,500
Tank Level Gauge	1		10,800
Shaft Power Indicator	1		3,150
Sensors	1		5,000
Automation Adjustment	1		26,584
Total (Machinery Part)			662,258

10. Electric Part

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Receptacle	1 set		768
Storage Battery	1 set		3,309
Transformer	1 set		2,679
Shore Connection Box	1		320
Main Switchboard	1		17,820
Emergency Switchboard	1		3,870
Battery Charger Panel	1		2,160
Electric Motors	1 set		15,278
Starter	1 set		15,200
Bow-thruster Starter Panel	1		3,144
Receptacle for Power Source	1 set		46
Group Starter	1 set		3,600
Wheelhouse Group Starter	1 set		8,640
General Lighting	1 set		3,360
Movable Light	5		60
Flood Light	1 set		275
Search Light	2	Xenon lamp, remote control, 6kW	13,712
Search Light	1	Xenon lamp, remote control, 3kW	5,659
Flood Light	50	Halogen lamp, 500W	1,152
Mast Head Light	2		236
Side Light	1 pair		236
Stern Light	1		35
Anchor Light	2		85
Red Light	1		45
Fishing Light	3		168
Signal for Trawler	4		123
Day Light Signal Light	1		45

Equipment	Q'ty	Particulars	Cost
Life Saving Lights	1 set		482
Onboard Crew Display	1		1,710
"Observation" Display Lamp	1		54
Electric Part Spare Parts	1		244
Magnetic Compass	1	reflector type, card dia.165mm	835
Gyro Compass	1	IMO approved type	6,620
Satellite Compass	1	4.5" LCD with DGPS function,	1,240
Auto Pilot	1		4,824
Joystick Control System	1 set		36,000
Marine Radar	2	X band, 25kW, 96 n.mile	11,700
Color Video Plotter	1	10.4" TFT LCD Display,	3,008
ECDIS	1	23.1" color LCD, Position Calculation,	14,360
Ship LAN System	1		85,000
GPS Navigator	2	6" LCD with DGPS function,	3,200
Doppler Speed Log	1		1,080
AIS	1		2,400
Automatic Weather Station	1		15,660
Aneroid Barometer	2		270
Navigational Echo Sounder	1	6.5" color LCD, 50 and 200 kHz,	704
Depth Display	3		480
Loading Calculator	1		2,250
Quartz Clock	1 set		1,926
Inclinometer	2		248
Ruder Angle Indicator	1		1,350
Air Horn	1		200
Piston Horn			728
Time Controller	1		139
Auto-exchange Telephone	1 set		12,800
NO.1 Common Battery Tele.	1		344
NO.2 Common Battery Tele.	1		128
NO.3 Common Battery Tele.	1		75
Bell System	1 set		80
Public Addresser	1 set		14,400
Fire Detecting System	1		640
Ref. Chamber Alarm	1		120
Radio, Television System	1 set		15,802
Business equipment	1 set		411
Radio Equipment		A1+A2+A3	19,213
No.1 MF/HF Radio Telephone	1		7,200
No.1 VHF Telephone	1		1,040

Equipment	Q'ty	Particulars	Cost
NAVTEX Receiver	2		600
EPIRB	1		360
Two-way Radio Telephone	3		960
Radar Transponder (SART)	2		640
INMARSAT-C System	1		2,400
No.2 VHF Radio Telephone	1		800
Shipboard Maintenance Equip.	1 set		4,000
Inmarsat Fleet Broadband	1 set		9,500
MF/HF Radio Telephone	1		2,400
All-wave Receiver	2		2,560
27MHz DSB Receiver	1		280
27MHz SSB Receiver	1		960
40MHz DSB Receiver	1		320
Onboard Radio Telephone	6		2,640
Weather Facsimile	1		1,280
Antenna System	1 set		2,840
Monitor TV System	2 sets	for deck and engine room	13,920
BNWAS	1		1,500
V-SAT	1		6,100
Total (Electric Part)			425,050

11. Survey Equipment (Japan)

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
2,000m CTD Winch	1	7.84kN×60m/min, ϕ 6.4×2,000m(armored)	12,870
2,000m Hydrography Winch	1	5.9kN×60m/min, ϕ 5(SUS)×2,000m	12,800
Multi Net Winch	1	25.5kN×60m/min, ϕ 10.52×2,000m(armored)	18,300
Hoist for Deck Use	2	0.9t×12m/min	1,120
Hoist for CTD Dolly	1	0.25t×7m/min	800
Fore Crane (general use)	1	8.82/3.92kN ×7.5/11.0m	9,045
Mid Space Crane (fishing)	1	8.82/14.7kN ×9.0/6.4m	9,045
Deck Crane	1	24.5/20.0kN ×11.5/14.1m	32,175
A Frame (aft)	1	SWL 53.9kN, outreach 3.0m	21,904
A Frame (midship)	1	SWL 29.4kN, outreach 3.0m	30,060
Davit for Observation	1	0.5t×3m/r	6,400
Larva Net	1 set		375
Block Rack	1 set		640
Reverse osmosis water purifier	1	Aquarius RFP542HA 25L/h at 25°C	568
Ultra-Pure Water Generator	1	Aquarius FRU414CA/CB 0.65L/min	906
Deep Freezer	1	-86°C, 350×1	696
Sample Storage Freezer	1	-25°C 3650 × 1	440

Equipment	Q'ty	Particulars	Cost
Medical Refrigerator	1	100~200ℓ, 2 point temp. alarm	520
Fish Finding Sonar	1	FURUNO FSV-35	29,800
Multiple Corer	1	4 transparent PVC tubes	6,810
Bottom Grab	1	Van Veen Grab Sampler	500
CTD System Dolly	1		800
CTD System Pedestal	1 set		80
Survey Equipment	1 set		2,800
Sediment Electric Grinder	1		150
PH Meter	1	HORIBA	85
Onboard Sediment Sieving System	1		1,000
Clean Oven	1	99ℓ, 0-250°C	250
Stereoscopic Microscope	2	Nikon SMZ 1000	900
Ichtyometer	2		10
Marine Precision Scale	2	Max.800g, precision 0.01g	160
Total (Survey Equip.(Japan))			202,009

12. Survey Equipment (Import)

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
CTD System	1 set	Sea Bird, SBE 911plus CTD	28,830
Hydro-Bios MultiNet	1	Type Midi Net opening 0.25m ²	11,394
ADCP	1	Ocean Surveyor 150kHz	15,030
L-ADCP	1	T. RD Instruments	6,020
Doppler Current Meter	4	SEAGUARD, 4 sets, RCM, 2,000m	18,604
Mooring System	2 sets		23,440
Tide Meter	1	SEAGUARD WLR, 4647C-300m	1,980
Scientific Fish Finder	1	SIMRAD EK60, 18/38/120/200kHz	51,930
Data Processing Soft-ware			11,013
Scientific Multibeam Sonar	1	SIMRAD ME 70	144,000
Multibeam Echo Sounder	1	SIMRAD ME710, Depth 1500m	82,800
Multibeam Analysis Soft	1		4,050
Synchronous Transmitter	1		12,870
Scanbas System	1 set	SCANMAR	41,589
Particle Analysis and Imaging	1	FlowCAM	16,500
OPCS(LOPC-S)	1 set		29,600
Gyrocompass and Motion	1	KONGSBERG Seapath 300	15,210
Alkalinity & Dissolved Inorganic Carbon Extraction	1	MARIANDA VINDTA 3C	7,600
Particle Size Analyzer	1	Micromeritics SediGraph 5100	14,870
Inverted Microscope	2	Leica DM IL LED	900

Equipment	Q'ty	Particulars	Cost
Scale(big)	1	Max.60kg, precision 5g	2,000
Scale(small)	2	Max.3kg, precision 0.1g	3,100
Total (Survey Equip.(Import))			543,330

13. Fishing Equipment

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Auto Tension Winch System	1 set		36,000
Warp Winch	2	85/59/36kN×55/80/130m/mim	100,800
Net Winch	2	Bottom × 1, Pelagic × 1	70,000
Fishing Winch	2	29.4kN×40m/min, ϕ 14mm×40m S.W.R.	8,720
Trawl Winch Control Stand	1		64,000
Otter Board for bottom trawl	2 pair		14,400
Otter Board for pelagic	1 pair		7,200
Otter Board Accessories	1 set		855
Bottom Trawl Net	2	for Fishes	25,200
Bottom Trawl Net	2	for Cephalopods	27,000
Bottom Trawl Net	2	for Shrimp/Hake	45,000
Pelagic Trawl Net	2	for Fishes	55,800
Warp	2	T6×WS(26), ϕ 18mm×5000m	20,000
Fishing Gear and Tool	1 set		2,400
Slipway Door	1		5,440
Horizontal Roller	1 set		800
Top Roller	2		6,400
Total (Fishing Equipment)			490,015

(3) Breakdown of Equipment Cost for Plan-B (800G/T)

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8. Hull Part

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Steering Gear	1	torque 58.8kN-m, 3.7kW	5,000
Bow Thruster	1	electric, CPP, thrust 29.4kN, 163kW	15,000
Windlass	2	1CD-1HD-1WE, 25.5kN x 12m/min	13,403
Capstan	2	19.6kN×20m/min	4,000
Mooring Equipment	1 set	Bollard, Fair-leader, Mooring pipe	1,723
Wharf Ladder	1	aluminum, length 5.0m x breadth 0.6m	400
Bulwark Ladder	1	breadth 0.6m	408
Pilot Ladder	2		160
Flash Hatch	1	hyd. cylinder driven, size 1.80m x 1.30m	2,400
Life Raft	6	inflatable, class A, 20 persons	4,320
Rescue Boat	1	FRP, 6 persons, Length 4.36m,	2,880
Rescue Boat Davit	1	single boom slewing type, 7.5kW	3,360
Lifebuoy	8		151
Life Jacket	41	inflatable, with lifejacket light	558
Life Vest	29		581
Immersion Suit	39		1,186
Line-throwing App.	1		144
Signals	1 set		316
Fire Detecting System	1 set	Heat and smoke detector system	2,444
Emergency fire pump	1	25m ³ /h×40m×11kW	560
Fire Hydrant	1 set		71
Fire Extinguisher	1 set	Portable extinguisher, Fireman's Outfit, EEBD	872
Fixed CO ₂ Fire-extinguishing	1 set	for engine room	868
Deck Bilge Pump	1	1.8m ³ /h×18m	128
Square Window	18	for wheelhouse, with window wiper	11,451
Round Windows	18	φ 300mm	1,377
Square Window	11	350×550mm	1,026
Mechanical Fan	6		1,581
Accommodation Work	1 set		105,534
Table with Exhaust Fan	1		900
Disposer	2		1,168
Household Appliances	1 set		3,043
Cooking Range	1	electric 35kW	2,295
Rice Cooker	2	6L	1,920
Tilting Braising Pan	1	electric 9kW, 50L	1,011
Water Boiler	1	electric 3kW, 30L	183
Refrigerator	1	1500L	1,207

Equipment	Q'ty	Particulars	Cost
Disposer	1	15kg/min, 2.2kW	583
Ice Maker	1	38kg/day	440
Air Towel	1		40
Galley Equipment	1 set		1,109
Kitchen Supplies	1 set		3,520
Bath Equipment	1		375
Bow Anchor	2	AC14 high holding type, 675kg	190
Anchor Chain Cable	1 set	galvanized, dia. 26mm x 357.5m	893
Mooring Line	1 set		1,933
Deck Inventory	1 set		9,041
Air Fender	2	rubber, dia. 1.0m x length 1.50m	2,400
Fender	4	φ 500mm×1200mm	320
Total (Hull Part)			214,473

9. Machinery Part

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Main Engine & Propeller	1	1,471kW×750min ⁻¹ , 4CPPX2,550φ	190,000
FO Purifier	1		3,520
LO Purifier for M/E	1		4,864
Low Temp. FW cooler	2		5,314
High Temp. FW cooler	2		720
Main Generator Engine	2	Rated output: 254kW×1000min ⁻¹	68,000
Emergency Generator Engine	1	Rated output: 30kW×1500min ⁻¹	2,500
Hot Water Boiler	1		7,019
Calorifire	1		398
Main Air Compressor	2		3,384
Main Air Vessel	2		1,274
Aux. Air Vessel	1		557
Hyd. Pump Unit	1 set		39,302
Fresh Water Generator	1	10t/day, Plate type Titan plate	6,642
Fresh Water Generator	1	5t/day, Reverse osmosis type	5,265
Bilge Alarm	1 set		1,600
Water Level Gauge	1 set		4,764
Air Conditioning Unit	1 set		32,056
Smoke Separator	2	for smoker	1,080
Ref. Machine for Prov. Store	1 set		8,280
Sewage Treatment Device	1	40 persons, discharge pump 1.5kW x 2	8,131
Sewage Collecting Tank	1	250L, sewage transfer pump 1.5kW	1,600

Equipment	Q'ty	Particulars	Cost
Main Cooling SW Pump	2	Centrifugal (1set stand-by)	1,360
M/E Stand-by HTCFW Pump	1	Centrifugal	336
M/E Stand-by LO Pump	1	Gear	1,072
M/E Stand-by FO Supply Pump	1	Gear	320
R/G Stand-by LO Pump	1	Gear	256
R/G Clutch Oil Pump	1	Gear	312
R/G Stand-by Clutch Oil Pump	1	Gear	208
LT Cooling FW Pump	3	Centrifugal (1set stand-by)	1,008
Bilge and Fire Pump	1	65/30m ³ /hX25/45mX15kW	1,843
G. Service and Fire Pump	1	65/30m ³ /hX25/45mX15kW	1,843
Sanitary Pump	2	30m ³ /hX28mX2.2kW	422
FW Transfer Pump	1	10m ³ /hX35mX3.7kW	376
FW Service Pump	1	8m ³ /hX48mX2.2kW(potable water)	369
Distilled FW Service Pump	1	8m ³ /hX48mX2.2kW	369
HW Circulating Pump	2	5m ³ /hX25mX1.5kW	538
HTW Circulating Pump	2	30m ³ /hX20mX3.7kW	538
Bilge Pump(O/W separat)	1	0.5m ³ /hX 0.3MPaX 0.4kW	369
Waste Oil Transfer Pump	1	2m ³ /hX 0.4MPaX 1.5kW	530
FO Transfer Pump	1	10m ³ /hX 0.3MPaX3.7kW	277
FO Service Pump	1	2m ³ /hX0.25MPaX0.75kW	223
LO Transfer Pump	1	1m ³ /hX0.25MPaX0.75kW	162
Gray Water Transfer Pump	2	8m ³ /hX40mX3.7kW	522
Anchoring LTCFW Pump	1	Centrifugal	256
Labo. Sea Water Pump	1		480
Sea Water Pump for OPCS	1		360
Portable Pump	2		38
Marine Growth Prevention Eq.	2		3,240
Drink Water Sterilizer	1		3,600
Oily Water Separator	1	0.25m ³ /h (15ppm)	900
Flow Meter	1 set		2,400
E/R Supply Ventilation Fan	2		2,736
E/R Exhaust Ventilation Fan	1		314
Dehumidification Equipment	1	25 Nm ³ /m ³ ×0.69MPa	576
Transceiver	5		135
Workshop Equipment	1 set		4,160
Machinery Part Spare Parts	1 set		8,209
Propulsion Control Console	1		5,760
Winch Control Console	1		3,240

Equipment	Q'ty	Particulars	Cost
Engine Control Console	1		13,320
Engine Side Panel	1		2,160
Engine Control Room Equip.	1		640
Engine Data Logger System	1		36,000
Engine Telegraph	1		3,600
Spare Parts Maintenance Control system	1		13,500
Tank Level Gauge	1		8,640
Shaft Power Indicator	1		2,520
Sensors	1		11,308
Automation Adjustment	1		14,086
Total (Machinery Part)			551,701

10. Electric Part

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Receptacle	1 set		617
Storage Battery	1 set		3,309
Transformer	1 set		2,679
Shore Connection Box	1		320
Main Switchboard	1		14,256
Emergency Switchboard	1		3,096
Battery Charger Panel	1		1,728
Electric Motors	1 set		15,278
Starter	1 set		12,160
Bow-thruster Starter Panel	1		2,358
Receptacle for Power Source	1 set		37
Group Starter	1 set		2,894
Wheelhouse Group Starter	1 set		6,947
General Lighting	1 set		2,702
Movable Light	4		48
Flood Light	1 set		221
Search Light	2	Xenon lamp, remote control, 6kW	13,712
Search Light	1	Xenon lamp, remote control, 3kW	5,659
Flood Light	40	Halogen lamp, 500W	926
Mast Head Light	2		236
Side Light	1 pair		236
Stern Light	1		35
Anchor Light	2		85
Red Light	1		45

Equipment	Q'ty	Particulars	Cost
Fishing Light	3		168
Signal for Trawler	4		123
Day Light Signal Light	1		45
Life Saving Lights	1 set		482
Onboard Crew Display	1		1,710
"Observation" Display Lamp	1		54
Electric Part Spare Parts	1		244
Magnetic Compass	1	reflector type, card dia. 165mm	835
Gyro Compass	1	IMO approved type	6,620
Satellite Compass	1	4.5" LCD with DGPS function,	1,240
Auto Pilot	1		4,824
Joystick Control System	1 set		36,000
Marine Radar	2	X band, 25kW, 96 n.mile	11,700
Color Video Plotter	1	10.4" TFT LCD Display,	3,008
ECDIS	1	23.1" color LCD, Position Calculation,	14,360
Ship LAN System	1		81,000
GPS Navigator	2	6" LCD with DGPS function,	3,200
Doppler Speed Log	1		1,080
AIS	1		2,400
Automatic Weather Station	1		15,660
Aneroid Barometer	2		270
Navigational Echo Sounder	1	6.5" color LCD, 50 and 200 kHz,	704
Depth Display	3		480
Loading Calculator	1		2,250
Quartz Clock	1 set		1,549
Inclinometer	2		248
Ruder Angle Indicator	1		1,350
Air Horn	1		200
Piston Horn			728
Time Controller	1		139
Auto-exchange Telephone	1 set		10,291
NO.1 Common Battery Tele.	1		344
NO.2 Common Battery Tele.	1		128
NO.3 Common Battery Tele.	1		75
Bell System	1 set		80
Public Addresser	1 set		11,578
Fire Detecting System	1		515
Ref. Chamber Alarm	1		120

Equipment	Q'ty	Particulars	Cost
Radio, Television System	1 set		11,047
Business equipment	1 set		411
Radio Equipment		A1+A2+A3	19,213
No.1 MF/HF Radio Telephone	1		7,200
No.1 VHF Telephone	1		1,040
NAVTEX Receiver	2		600
EPIRB	1		360
Two-way Radio Telephone	3		960
Radar Transponder (SART)	2		640
INMARSAT-C System	1		2,400
No.2 VHF Radio Telephone	1		800
Shipboard Maintenance Equip.	1 set		4,000
Inmarsat Fleet Broadband	1 set		9,500
MF/HF Radio Telephone	1		2,400
All-wave Receiver	2		2,560
27MHz DSB Receiver	1		280
27MHz SSB Receiver	1		960
40MHz DSB Receiver	1		320
Onboard Radio Telephone	6		2,640
Weather Facsimile	1		1,280
Antenna System	1 set		2,840
Monitor TV System	2 sets	for deck and engine room	11,192
BNWAS	1		1,500
V-SAT	1		6,100
Total (Electric Part)			395,629

11. Survey Equipment (Japan)

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
2,000m CTD Winch	1	7.84kN×60m/min, ϕ 6.4×2,000m(armored)	12,870
2,000m Hydrography Winch	1	5.9kN×60m/min, ϕ 5(SUS)×2,000m	12,800
Multi Net Winch	1	25.5kN×60m/min, ϕ 10.52×2,000m(armored)	18,300
Hoist for Deck Use	2	0.9t×12m/min	1,120
Hoist for CTD Dolly	1	0.25t×7m/min	800
Mid Space Crane (fishing)	1	8.82/14.7kN ×9.0/6.4m	9,045
Deck Crane	1	24.5/20.0kN ×11.5/14.1m	32,175
A Frame (aft)	1	SWL 53.9kN, outreach 3.0m	21,904
A Frame (midship)	1	SWL 29.4kN, outreach 3.0m	30,060
Davit for Observation	1	0.5t×3m/r	6,400

Equipment	Q'ty	Particulars	Cost
Larva Net	1 set		375
Block Rack	1 set		640
Reverse osmosis water purifier	1	Aquarius RFP542HA 25L/h at 25°C	568
Ultra-Pure Water Generator	1	Aquarius FRU414CA/CB 0.65L/min	906
Deep Freezer	1	-86°C, 350×1	696
Sample Storage Freezer	1	-25°C 3650 × 1	440
Medical Refrigerator	1	100~2000, 2 point temp. alarm	520
Fish Finding Sonar	1	FURUNO FSV-35	29,800
Multiple Corer	1	4 transparent PVC tubes	6,810
Bottom Grab	1	Van Veen Grab Sampler	500
CTD System Dolly	1		800
CTD System Pedestal	1 set		80
Survey Equipment	1 set		2,800
Sediment Electric Grinder	1		150
PH Meter	1	HORIBA	85
Onboard Sediment Sieving System	1		1,000
Clean Oven	1	990, 0-250°C	250
Stereoscopic Microscope	2	Nikon SMZ 1000	900
Ichthyometer	2		10
Marine Precision Scale	2	Max.800g, precision 0.01g	160
Total (Survey Equip.(Japan))			192,964

12. Survey Equipment (Import)

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
CTD System	1 set	Sea Bird, SBE 911plus CTD	28,830
Hydro-Bios MultiNet	1	Type Midi Net opening 0.25m ²	11,394
ADCP	1	Ocean Surveyor 150kHz	15,030
L-ADCP	1	T. RD Instruments	6,020
Doppler Current Meter	4	SEAGUARD, 4 sets, RCM, 2,000m	18,604
Mooring System	2 sets		23,440
Tide Meter	1	SEAGUARD WLR, 4647C-300m	1,980
Scientific Fish Finder	1	SIMRAD EK60, 18/38/120/200kHz	51,930
Data Processing Soft-ware			11,013
Scientific Multibeam Sonar	1	SIMRAD ME70	144,000
Multibeam Echo Sounder	1	SIMRAD ME710, Depth 1500m	82,800
Multibeam Analysis Soft	1		4,050
Synchronous Transmitter	1		12,870
Scanbas System	1 set	SCANMAR	41,589

Equipment	Q'ty	Particulars	Cost
Particle Analysis and Imaging	1	FlowCAM	16,500
OPCS(LOPC-S)	1 set		29,600
Gyrocompass and Motion Sensor	1	KONGSBERG Seapath 300	15,210
Alkalinity & Dissolved Inorganic Carbon Extraction	1	MARIANDA VINDTA 3C	7,600
Particle Size Analyzer	1	Micrometritics SediGraph 5100	14,870
Inverted Microscope	2	Leica DM IL LED	900
Scale(big)	1	Max.60kg, precision 5g	2,000
Scale(small)	2	Max.3kg, precision 0.1g	3,100
Total (Survey Equip.(Import))			543,330

13. Fishing Equipment

(in thousands yen)

Equipment	Q'ty	Particulars	Cost
Auto Tension Winch System	1 set		36,000
Warp Winch	2	85/59/36kN×55/80/130m/mim	100,800
Net Winch	2	Bottom × 1, Pelagic × 1	70,000
Fishing Winch	2	29.4kN×40m/min. φ 14mm×40m S.W.R.	8,720
Trawl Winch Control Stand	1		64,000
Otter Board for bottom trawl	2 pair		14,400
Otter Board for pelagic	1 pair		7,200
Otter Board Accessories	1 set		855
Bottom Trawl Net	2	for Fishes	25,200
Bottom Trawl Net	2	for Cephalopods	27,000
Bottom Trawl Net	2	for Shrimp/Hake	45,000
Pelagic Trawl Net	2	for Fishes	55,800
Warp	2	T6×WS(26), φ 18mm×5000m	20,000
Fishing Gear and Tool	1 set		2,400
Slipway Door	1		5,440
Horizontal Roller	1 set		800
Top Roller	2		6,400
Total (Fishing Equipment)			490,015

6-2. 支出及び償還スケジュール

(1) 支出スケジュール

Plan A: 一般アンタイト

Item	Total			2014			2015			2016			2017			2018			2019			2020		
	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total			
A. ELIGIBLE PORTION	6,132	0	6,132	0	0	0	0	0	0	0	0	0	0	0	0	1,481	0	1,481	3,024	0	3,024	1,628	0	1,628
I) Procurement / Construction	4,310	0	4,310	0	0	0	0	0	0	0	0	0	0	0	0	1,077	0	1,077	2,155	0	2,155	1,077	0	1,077
Building Cost	381	0	381	0	0	0	0	0	0	0	0	0	0	0	0	90	0	90	181	0	181	90	0	90
Design Cost	283	0	283	0	0	0	0	0	0	0	0	0	0	0	0	71	0	71	142	0	142	71	0	71
General Expenses	25	0	25	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	12	0	12	6	0	6
Other Expenses	54	0	54	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	54	0	54
Transportation	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	0	10
Training for Officers and Crews at Shipyard	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	5
Familiarization of Equipment in Morocco	5,048	0	5,048	0	0	0	0	0	0	0	0	0	0	0	0	1,245	0	1,245	2,490	0	2,490	1,313	0	1,313
Base cost for JICA financing	793	0	793	0	0	0	0	0	0	0	0	0	0	0	0	165	0	165	390	0	390	237	0	237
Price escalation	292	0	292	0	0	0	0	0	0	0	0	0	0	0	0	71	0	71	144	0	144	78	0	78
Physical contingency	484	3	513	0	0	0	12	0	13	201	1	212	28	0	30	82	0	86	85	0	89	76	1	83
Base cost	411	3	438	0	0	0	11	0	12	176	1	187	24	0	25	69	0	73	70	0	73	61	1	68
Price escalation	50	0	51	0	0	0	1	0	1	15	0	15	3	0	3	9	0	9	11	0	11	11	0	11
Physical contingency	19	0	21	0	0	0	1	0	1	10	0	10	1	0	1	4	0	4	4	0	4	4	0	4
Total (I + II)	6,616	3	6,646	0	0	0	12	0	13	201	1	212	28	0	30	1,563	0	1,567	3,109	0	3,112	1,704	1	1,711
B. NON ELIGIBLE PORTION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
a) Procurement / Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost for JICA financing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b) Land Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c) Administration cost	0	38	332	0	0	0	0	0	1	11	0	11	0	0	2	0	9	78	0	18	156	0	10	86
VAT	0	139	1,226	0	0	0	0	0	0	0	0	0	0	0	0	34	296	0	69	605	0	37	326	
Import Tax	0	17	153	0	0	0	0	0	0	0	0	0	0	0	0	4	37	0	9	76	0	5	41	
Total (a+b+c+d+e)	0	195	1,712	0	0	0	0	0	1	11	0	11	0	0	2	0	47	412	0	95	836	0	51	452
TOTAL (A+B)	6,616	198	8,358	0	0	0	12	0	14	201	2	223	28	0	32	1,563	47	1,979	3,109	95	3,948	1,704	52	2,163
C. Interest during Construction	171	0	171	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21	63	0	63	87	0	87
Interest during Construction (Const.)	171	0	171	0	0	0	0	0	0	0	0	0	0	0	0	21	0	21	63	0	63	87	0	87
Interest during Construction (Consul.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. Commitment Charge	48	0	48	7	0	7	7	0	7	7	0	7	7	0	7	7	0	7	7	0	7	7	0	7
GRAND TOTAL (A+B+C+D)	6,835	198	8,577	7	0	7	19	0	20	208	2	230	35	0	39	1,591	47	2,006	3,179	95	4,019	1,798	52	2,257
GRAND TOTAL (excluding VAT & import duty)	6,835	41	7,197	7	0	7	19	0	20	208	2	230	35	0	39	1,591	9	1,673	3,179	18	3,338	1,798	11	1,890
E. JICA finance portion (A)	6,616	3	6,646	0	0	0	12	0	13	201	1	212	28	0	30	1,563	0	1,567	3,109	0	3,112	1,704	1	1,711

Plan B : 一般アンタイド

Item	Total			2014			2015			2016			2017			2018			2019			2020			
	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	
A. ELIGIBLE PORTION																									
1.) Procurement / Construction	5,171	0	5,171	0	0	0	0	0	0	0	0	0	0	0	0	1,247	0	1,247	2,546	0	2,546	1,378	0	1,378	
Building Cost	3,542	0	3,542	0	0	0	0	0	0	0	0	0	0	0	0	886	0	886	1,771	0	1,771	886	0	886	
Design Cost	361	0	361	0	0	0	0	0	0	0	0	0	0	0	90	0	90	181	0	181	90	0	90		
General Expenses	204	0	204	0	0	0	0	0	0	0	0	0	0	0	66	0	66	132	0	132	66	0	66		
Other Expenses	25	0	25	0	0	0	0	0	0	0	0	0	0	0	6	0	6	12	0	12	6	0	6		
Transportation	49	0	49	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Training for Officers and Crews at Shipyard	10	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Familiarization of Equipment in Morocco	5	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
Base cost for JICA financing	4,256	0	4,256	0	0	0	0	0	0	0	0	0	0	0	1,048	0	1,048	2,096	0	2,096	1,112	0	1,112		
Price escalation	669	0	669	0	0	0	0	0	0	0	0	0	0	0	139	0	139	328	0	328	201	0	201		
Physical contingency	246	0	246	0	0	0	0	0	0	0	0	0	0	0	59	0	59	121	0	121	66	0	66		
II.) Consulting services	484	3	513	0	0	0	12	0	13	201	1	212	28	0	30	82	0	86	85	0	89	76	1	83	
Base cost	411	3	438	0	0	0	11	0	12	176	1	187	24	0	26	89	0	73	70	0	73	61	1	68	
Price escalation	50	0	51	0	0	0	1	0	1	15	0	15	3	0	3	9	0	9	11	0	11	11	0	11	
Physical contingency	19	0	21	0	0	0	1	0	1	10	0	10	1	0	1	4	0	4	4	0	4	4	0	4	
Total (I + II)	5,655	3	5,685	0	0	0	12	0	13	201	1	212	28	0	30	1,329	0	1,333	2,631	0	2,635	1,454	1	1,461	
B. NON ELIGIBLE PORTION																									
a) Procurement / Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Base cost for JICA financing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
b) Land Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Base cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
c) Administration cost	0	32	284	0	0	0	0	0	1	0	1	11	0	0	2	0	8	67	0	15	132	0	8	73	
d) VAT	0	118	1,034	0	0	0	0	0	0	0	0	0	0	0	0	0	28	249	0	58	509	0	31	276	
e) Import Tax	0	15	129	0	0	0	0	0	0	0	0	0	0	0	0	0	4	31	0	7	64	0	4	34	
Total (a+b+c+d+e)	0	165	1,448	0	0	0	0	0	1	0	1	11	0	0	2	0	39	347	0	80	705	0	44	383	
TOTAL (A+B)	5,655	166	7,132	0	0	0	12	0	14	201	2	223	28	0	32	1,329	40	1,680	2,631	80	3,339	1,454	44	1,845	
C. Interest during Construction																									
Interest during Construction(Const.)	144	0	144	0	0	0	0	0	0	0	0	0	0	0	0	17	0	17	53	0	53	73	0	73	
Interest during Construction (Consul.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
D. Commitment Charge																									
Commitment Charge	41	0	41	0	0	0	0	0	0	0	0	0	0	0	0	6	0	6	6	0	6	6	0	6	
GRAND TOTAL (A+B+C+D)	5,840	166	7,317	6	0	6	18	0	19	207	2	229	34	0	38	1,352	40	1,704	2,690	80	3,398	1,533	44	1,924	
GRAND TOTAL (excluding VAT & Import duty)	5,940	36	6,154	6	0	6	18	0	19	207	2	229	34	0	38	1,352	8	1,423	2,690	16	2,926	1,533	9	1,614	
E. JICA finance portion incl. IDC (A)	5,655	3	5,685	0	0	0	12	0	13	201	1	212	28	0	30	1,329	0	1,333	2,631	0	2,635	1,454	1	1,461	

Plan B : ステップ

Item	Total			2014			2015			2016			2017			2018			2019			
	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	FC	LC	Total	
																						FC
A. ELIGIBLE PORTION																						
I) Procurement / Construction	5,299	0	5,299	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Building Cost	3,663	0	3,663	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Design Cost	361	0	361	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
General Expenses	269	0	269	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other Expenses	22	0	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Transportation	93	0	93	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Delivery in Morocco	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Training for Officers and Crews in Japan	13	0	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Familiarization of Equipment in Morocco	7	0	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost for JICA financing	4,429	0	4,429	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	617	0	617	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	252	0	252	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
II) Consulting services	302	2	321	0	3	3	67	0	3	67	0	70	50	1	71	50	0	52	116	1	125	1
Base cost	255	2	273	0	3	3	59	0	3	59	0	61	56	1	61	42	0	44	95	1	103	1
Price escalation	32	0	32	0	0	0	0	0	0	0	0	5	6	0	6	6	0	6	15	0	15	0
Physical contingency	14	0	15	0	0	0	0	0	0	0	0	3	3	0	3	2	0	2	6	0	6	0
Total (I + II)	5,600	2	5,620	0	3	3	67	0	3	67	0	70	1,322	1	1,328	1,334	0	1,336	2,874	1	2,883	1
B. NON ELIGIBLE PORTION																						
a Procurement / Construction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost for JICA financing	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
b Land Acquisition	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Base cost	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Price escalation	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Physical contingency	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
c Administration cost	0	32	281	0	0	0	0	0	0	0	0	3	0	8	66	0	8	67	0	16	144	16
d VAT	0	120	1,060	0	0	0	0	0	0	0	0	0	0	29	251	0	29	257	0	63	552	63
e Import Tax	0	15	132	0	0	0	0	0	0	0	0	0	0	4	31	0	4	32	0	8	69	8
Total (a+b+c+d+e)	0	167	1,473	0	0	0	0	0	0	0	0	3	0	40	349	0	40	356	0	87	765	87
TOTAL (A+B)	5,600	170	7,093	0	3	3	67	1	73	1,322	40	1,677	1,334	41	1,691	2,874	88	3,648				
C. Interest during Construction																						
Interest during Construction(Const.)	18	0	18	0	0	0	0	0	0	0	0	0	3	5	0	0	5	11	0	0	11	0
Interest during Construction (Consul.)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
D. Commitment Charge																						
Commitment Charge	34	0	34	6	0	6	6	0	6	6	0	6	6	0	6	6	0	6	6	0	6	6
GRAND TOTAL (A+B+C+D)	5,653	170	7,145	6	9	6	9	73	1	79	1,331	1,403	1,344	41	1,685	2,880	94	3,702				
GRAND TOTAL (excluding VAT & import duty)	5,653	34	5,953	6	0	6	9	73	1	79	1,331	8	1,403	1,344	8	1,413	2,890	17	3,043			
E. JICA finance portion incl. IDC (A)	5,600	2	5,620	0	0	0	3	67	0	70	1,322	1	1,328	1,334	0	1,336	2,874	1	2,883			

2. STEP LOAN		40 years																				Total		
Repayment Period	Grace Period	Interest Rate																				Total		
0.20%	0.01%	(for consulting service)																				Total		
PLAN A		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total		
Principal (Vessel)	(Consultant)	0	0	0	1,490,008	1,521,259	3,249,531																6,260,838	6,581,915
Interest (Vessel)	(Consultant)	0	3,257	69,966	70,866	52,419	124,539																321,077	157,970
Repayment (Vessel)	(Consultant)	0	0	0	0	0	12,522	12,547	12,572	12,597	12,622	12,647	11,804	11,394	10,983	10,571	10,158	9,744	9,330	8,915				
Balance (Vessel)	(Consultant)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Balance (Vessel)	(Consultant)	0	0	0	1,490,008	3,011,307	6,260,838	6,273,360	6,285,906	6,298,478	6,311,075	6,323,698	5,992,004	5,491,294	5,285,323	5,078,940	4,872,144	4,664,935	4,457,311	4,249,273	4,041,235			
Balance (Vessel)	(Consultant)	0	3,257	73,223	144,119	196,538	321,077	321,109	321,141	321,173	321,205	310,514	299,822	289,128	278,434	267,738	257,041	246,344	235,645	224,945	214,244			
Balance (Vessel)	(Consultant)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	6,260,838	6,581,915	
Balance (Vessel)	(Consultant)	8,499	8,082	7,664	7,245	6,826	6,406	5,985	5,563	5,140	4,716	4,292	3,866	3,440	3,013	2,585	2,157	1,727	1,297	865	433	157,970	158,372	
Balance (Vessel)	(Consultant)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	(216,954)	
Balance (Vessel)	(Consultant)	4,040,817	3,831,946	3,622,656	3,412,948	3,202,820	2,992,272	2,781,303	2,569,887	2,358,088	2,145,861	1,933,199	1,720,112	1,506,598	1,292,658	1,078,290	863,493	648,266	432,609	216,521	(10)	6,418,808	6,740,287	
Balance (Vessel)	(Consultant)	203,542	192,839	182,135	171,429	160,723	150,016	139,307	128,596	117,887	107,176	96,463	85,749	75,034	64,318	53,601	42,883	32,164	21,444	10,722	(10)	321,479	321,479	
Balance (Vessel)	(Consultant)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20			
Principal (Vessel)	(Consultant)	0	0	0	1,257,075	1,283,474	2,758,262																	
Interest (Vessel)	(Consultant)	0	3,257	69,966	70,866	52,419	124,539																	
Repayment (Vessel)	(Consultant)	0	0	0	0	0	10,598	10,619	10,640	10,661	10,683	10,337	9,990	9,643	9,295	8,946	8,597	8,247	7,896	7,545				
Balance (Vessel)	(Consultant)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Balance (Vessel)	(Consultant)	0	0	0	1,257,075	2,540,549	5,298,811	5,309,409	5,320,027	5,330,667	5,341,329	5,168,395	4,995,114	4,821,488	4,647,514	4,473,192	4,298,521	4,123,501	3,948,131	3,772,411	3,596,338			
Balance (Vessel)	(Consultant)	0	3,257	73,223	144,119	196,538	321,077	321,109	321,141	321,173	321,205	310,514	299,822	289,128	278,434	267,738	257,041	246,344	235,645	224,945	214,244			
Balance (Vessel)	(Consultant)	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	5,298,811	5,619,888	
Balance (Vessel)	(Consultant)	7,193	6,840	6,486	6,132	5,777	5,421	5,065	4,708	4,350	3,992	3,632	3,272	2,912	2,550	2,188	1,825	1,462	1,097	732	367	133,897	134,099	
Balance (Vessel)	(Consultant)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	(183,617)	
Balance (Vessel)	(Consultant)	3,419,914	3,243,137	3,066,006	2,888,521	2,710,661	2,532,486	2,353,934	2,175,025	1,995,768	1,816,132	1,636,748	1,455,803	1,275,098	1,094,031	912,802	730,810	548,655	366,135	183,250	0	5,432,508	5,753,987	
Balance (Vessel)	(Consultant)	203,542	192,839	182,135	171,429	160,723	150,016	139,307	128,596	117,887	107,176	96,463	85,749	75,034	64,318	53,601	42,883	32,164	21,444	10,722	(10)	321,479	321,479	

6-3. 運航・運営維持管理費

(1) 新規調査船 (プランA: 約 1,100G/T)

運航年度	新規調査船(1,100GTの場合)																										
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	平均	Remarks
乗組員給与	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	2,987,124	
乗組員退職手当金等費	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	2,842,120	
その他	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	5,699,244	乗組員25名、監査員25名
燃料費	290,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	燃料費品目別明細書
船員食料(船員品等)	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	100,000	船員食料品目別明細書
小計	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	
船体保険料	0	2,318,873	2,960,876	2,404,879	2,448,884	2,482,884	2,538,887	2,586,889	2,644,892	2,688,894	2,712,897	2,756,899	2,800,902	2,844,905	2,888,908	2,932,910	2,976,913	3,020,916	3,064,918	3,108,921	3,152,924	3,196,927	3,240,930	3,284,933	3,328,936	3,372,939	
その他	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	880,613	
小計	3,197,486	3,241,489	3,285,492	3,329,495	3,373,497	3,417,497	3,461,497	3,505,500	3,549,503	3,593,503	3,637,503	3,681,503	3,725,503	3,769,503	3,813,503	3,857,503	3,901,503	3,945,503	3,989,503	4,033,503	4,077,503	4,121,503	4,165,503	4,209,503	4,253,503	4,297,503	
船料費	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	9,476,036	船料費 軽油
燃料油費	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	152,168	
潤滑油費	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820	13,820		
小計	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	9,642,023	
港湾費	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	200,750	
船舶保険料	1,080,000	1,041,200	1,002,200	963,400	924,560	885,680	846,800	807,920	769,040	730,160	691,280	652,400	613,520	574,640	535,760	496,880	458,000	419,120	380,240	341,360	302,480	263,600	224,720	185,840	146,960	613,617	
運賃費	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	300,000	
合 計	18,072,830	20,790,703	20,895,328	20,900,949	24,331,203	21,211,941	21,116,317	21,251,438	21,176,582	24,458,816	21,238,807	21,541,330	21,272,052	24,482,430	21,262,420	21,267,543	21,272,666	21,277,788	24,508,043	21,288,034	21,293,156	21,298,279	21,303,402	24,533,636	21,313,161		
検査時間																											

船員給与	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

燃料費	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

乗組員	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

乗組員	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

乗組員	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

燃料費	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

乗組員	乗組員		船長		合計(DH/年)
	手当/日	食料/日	手当/日	手当/日	
船長/第2船長	200	200	80	80	150,000
機関長/第2機関長	200	200	80	80	150,000
船医士(3名/年)	200	200	80	80	150,000
操縦士(3名/年)	200	200	80	80	150,000
機関士	150	200	70	70	67,830
船医	150	200	70	70	67,830
船医助手	150	200	70	70	67,830
ボイラー	150	200	70	70	67,830
コック	150	200	70	70	67,830
その他	200	200	0	0	1,200,000
監査員	200	200	0	0	2,842,120

乗組員	乗組員		船長		合計(DH/年)
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付属資料 7. 技術協力(T/A)

Project Design Matrix (PDM) ver.-1

2013年2月12日

プロジェクト名: 海洋調査船運航・維持管理能力開発プロジェクト(仮称)

対象地域: モロッコ国土

借入人: 経済財務省

直接受益者: INRH の職員約 159 人 (研究者約 113 名、乗組員約 46 人)

協力期間: 3 年間

実施機関: 農業海洋漁業省(管理分野)、INRH(技術分野)

運営機関: INRH

上位目標	指標データ	指標データ入手手段	外部条件
<p>プロジェクトサマリー</p> <p>1. 水産資源評価が実施される</p> <p>2. エコシステム解析が実施される</p>	<p>タコ、小型浮魚(大西洋南部水域の総量)以外に TAC の推定がなされる。</p> <p>漁業者への漁場情報提供が行われる。</p>	<ul style="list-style-type: none"> 官報 INRH の運営報告書 	
<p><u>プロジェクト目標</u></p> <p>新漁業調査船による調査データ収集体制が整備される。</p>	<ul style="list-style-type: none"> 水産資源評価用のデータが 2 年分陸上ラボに集積される。 エコシステム解析用のデータが 2 年分陸上ラボに集積される。 調査地点の漁場図が作成される。 	<ul style="list-style-type: none"> プロジェクト報告書 漁場図 	<ul style="list-style-type: none"> INRH の陸上ラボ研究者の離職・交代等が発生しない。 エコシステム・アプローチによる水産資源解析・評価方法が確立される。
<p><u>成果</u></p> <p>1. 新漁業調査船の運営管理体制が整備される。</p> <p>2. 新漁業調査船を運航する能力が向上し、トロール漁具によるサンプリング技術が改善される。</p> <p>3. 調査機器を活用する能力が向上し、信頼性が高く、かつ既存データとの互換性のあるデータが収集される。</p>	<p>1-1. 機材・予備品の在庫管理リストが作成される。</p> <p>1-2. 船体・機関、機器等の整備マニュアルが作成される。</p> <p>1-3. プロジェクト期間中の新漁業調査船の運航にかかる収支報告書が作成される。</p> <p>1-4. プロジェクト終了後の 2 年分の予算計画を含む運航計画が立案される。</p> <p>1-5. 関係機関と共同調査に向けた協議が実施される。</p> <p>2-1. 調査計画の 85% に相当する期間、運航が実施される(年間 145 日以上)。</p> <p>2-2. 水産生物のサンプルがトロール漁具(トロールセンサー、ADCP、スキヤニングナーを含む)を用いて収集・処理される(新採サンプル魚種を含む: 底魚 9 種(260 地点/年)、深海エビ 1 種(80 地点/年)および小型浮魚 8 種(300 地点/年)のサンプル収集)。</p> <p>3-1. 水産資源評価に必要な音響データが 4 周波(18, 38, 120, 200kHz)で収集・処理される(音響調査 9,000 マイル/年)。</p> <p>3-2. エコシステム解析に必要なデータが収集・処理される(ベントス/堆積土調査 230 地点/年、マルチネット調査 450 地点/年、CTD 調査 1000 地点/年、採水及び稚仔魚サンプル調査 450 地点/年)。</p> <p>3-3. 調査実施地点の海底地形データが収集・処理される(着底/深海 80 地点)。</p>	<ul style="list-style-type: none"> 在庫管理リスト 整備マニュアル 収支報告書 運航計画書 航海・漁労・機関日誌 調査報告書 調査報告書 	<ul style="list-style-type: none"> 研究者、乗組員の離職、交代等が発生しない。

<p><u>活動</u></p> <p>1-1. 現行調査の内容構成のレビューを行い、本プロジェクトに反映させる。 1-2. 現行船舶・機器整備のレビューを行い、本プロジェクトに反映させる。 1-3. 全てのメーカー提出の予備品リストを解析し、在庫管理リストを作成する。 1-4. 調査船の運航管理計画(案)及び機器管理マニュアル(案)を作成する。 1-5. 乗組員の研修・訓練(第三国及び/又は日本)を実施する。</p> <p>2-1. 調査航海を実施する。 2-2. 船舶運航に必要な機器類を稼働させる。 2-3. 水産生物のサンプル収集のためトロール操業を行う。</p> <p>3-1. OJTによる資源評価調査及びエコシステム調査航海を実施する。 3-2. 資源評価及びエコシステム解析に必要な調査機器類を稼働させる。 3-3. 資源評価及びエコシステム評価に必要なデータを収集する。</p>	<p><u>モロッコ国側</u></p> <p>1) カウンターパートの配置</p> <p>2) プロジェクト執務室及び事務施設の提供</p> <p>3) 調査・運営維持管理に必要な予算の確保</p> <p><u>投入</u></p> <p><u>日本側</u></p> <p>1) 専門家(75MM 程度) (短期専門家) ・調査船運航管理(25MM) ・航海・漁労技術(25MM) ・船舶機関(8MM) ・科学調査機器(6MM) ・音響調査機器(6MM) ・漁場図作成を含むその他短期専門家(5MM)</p> <p>2) 機材供与</p> <p>3) 研修員受入(第三国研修、本邦研修)</p> <p>4) 現地活動経費</p>	<ul style="list-style-type: none"> • INRH の運営予算が不足しない。 • 気象条件が例年に比較して大きく変動しない。 <p>前提条件</p> <ul style="list-style-type: none"> • モロッコ国内の政情が不安定にならない。
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