

**別添資料 3**

**P D M**

Project Name: Project on aquaculture research and technical development of Malawian indigenous species

Duration: April 1999 – March 2004

Date : Oct. 11, 2001

Project Area: Nation wide

Target group: Small-holder farmers  
Partly commercial farmers

Version :1

Narrative Summary	Objectively Verifiable Indicators	Means of Verification	Important Assumption
<p><b>Overall Goal</b> To establish appropriate fish-farming techniques in Malawi</p>	<p>Number of fish species cultured with established technique is increased</p>	<p>NAC report</p>	<p>Government policy to aquaculture development is not changed</p>
<p><b>Project Purpose</b> 1. To establish seed production techniques for new aquaculture species 2. To establish appropriate fish-farming techniques for existing aquaculture fish species</p>	<p>1. Seed production with at least 30% of survival rate is achieved for at least two new aquaculture species 2. Production at selected farmers is increased</p>	<p>1. NAC report Project Documents 2. NAC report Interview to fish farmers</p>	<ul style="list-style-type: none"> <li>Budget and personnel are adequately allocated</li> <li>Needs for aquaculture techniques and extension services for fish farmer</li> </ul>
<p><b>Outputs</b> 1.1 Reproductive ecology and spawning habits of new aquaculture species are clarified 1.2 Brood stock rearing techniques of new aquaculture species are established 1.3 Induced spawning and larvae/fry rearing techniques for new aquaculture species are established 2.1 Appropriate fish species and farming methods for variable physical, technical and socio-economic conditions are clarified 2.2 Constant seed production of Clariid catfish is achieved 2.3 Techniques developed at NAC are verified at selected fish farms 2.4 Farmer's willingness and interest in fish-farming is promoted 3. Mechanism to continue activities that are initiated by the project is established</p>	<p>1.1 Peaks of spawning season and induced breeding factors are understood for at least two new aquaculture species 1.2 Spawning of at least two new aquaculture species are produced from wild subadults 1.3 Seed production manuals are completed and seed production is conducted based on the manuals for at least two new aquaculture species 2.1 Criteria for determination of appropriate fish-farming method and a production target for each farming operations are clarified 2.2 (1) At least 100,000 fingerlings are produced annually (2) Seed production manual is completed and Clariid catfish seed production is conducted based on the manual 2.3 Production targets set in 2-1 are achieved at selected farms 2.4 Number of participants in workshops, seminars and number of inquiry from farmers to NAC and selected farmers are increased 3. (1) At least four research programs are initiated by Malawian counterparts on their own by 2004 (2) Share of revolving fund to the counter-value fund is increased from 25% to 75% (3) Share of fish sales in the revolving fund is increased from 20% to 50%</p>	<p>1.1 Project Documents 1.2 Project Documents 1.3 Project Documents Technical Manuals 2.1 Project Documents 2.2 Project Documents 2.3 Project Documents Interview to fish farmers 2.4 Report of workshop and seminar NAC report 3. NAC report Interview to fish farmers and counterparts</p>	<ul style="list-style-type: none"> <li>Inputs from both sides are timely and adequately provided</li> <li>Natural condition such as rain fall pattern does not greatly change</li> </ul>

Activities	Inputs	Pre-condition
<p><b>Activities</b></p> <p>1.1.1 Research on nutrition process under natural/ rearing conditions</p> <p>1.2.1 Research on rearing conditions for brood stock</p> <p>1.2.2 Development artificial food for brood stock</p> <p>1.3.1 Research on spawning inducement by hormone treatment</p> <p>1.3.2 Research on spawning inducement by environmental manipulation</p> <p>1.3.3 Research on early life history</p> <p>1.3.4 Research on rearing condition for larva/fry</p> <p>1.3.5 Development of natural feed cultivation and artificial food production technique</p> <p>2.1.1 research on fertilization techniques including tests of manure and integration of livestock</p> <p>2.1.2 Development of artificial food for existing aquaculture species</p> <p>2.1.3 Investigation on suitability of organic waste materials as fish food</p> <p>2.1.4 Study of production cycle</p> <p>2.1.5 Examination on species combination, stocking density, feeding rate, and other necessary for establishment of rearing techniques</p> <p>2.1.6 Improvement of techniques to prevent predation</p> <p>2.1.7 Examination on harvesting techniques including method, time and frequency</p> <p>2.2.1 Expansion of facilities for Clariid catfish seed production at NAC</p> <p>2.2.2 Trials on induced spawning by hormone treatment</p> <p>2.2.3 Establishment of mass seed production techniques of Clariid catfish</p> <p>2.3.1 Selection of farms/farmers for on farm research</p> <p>2.3.2 Selection of appropriate mode of fish-farming for each farm</p> <p>2.3.3 Implementation of on-farm research</p> <p>2.4.1 Holding Open Field Day</p> <p>2.4.2 Publishing aquaculture manual in local language and English</p> <p>2.4.3 Holding workshops for researchers/ extensionists/farmers</p> <p>3.1 Establish of a fund for aquaculture development at NAC</p> <p>3.2 Production and sale of fish through research activities at NAC</p> <p>3.3 Designing and planning of training for Malawian counterparts (Actual training is implemented under each activity)</p> <p>3.4 Publication of periodical or occasional reports to disseminate specific information obtained through the research activities</p>	<p><b>Human resources:</b></p> <ul style="list-style-type: none"> <li>Japanese long-term experts in four fields (seed production, food and feeding, rearing technique, on-farm research), chief advisor, project coordinator</li> <li>Japanese short-term experts (aquaculture management, Bilharzia protection, reproductive physiology, etc.)</li> <li>Malawian 12 counterparts (P.O., T.O., one each for each of the technical field of Japanese long-term expert)</li> <li>One executive officer for fund management and financial management of the project (Malawi)</li> </ul> <p><b>Facilities and equipment:</b></p> <ul style="list-style-type: none"> <li>Facilities and equipment for seed production at NAC and Kasinthula (Japan and Malawi)</li> <li>Staff accommodation at Kasinthula (Malawi)</li> <li>Vehicles (Japan and Malawi)</li> <li>Initial input for on-farm research such as pipes, nets, etc. (Japan and Malawi)</li> </ul> <p><b>Consumable, spare parts and allowances:</b></p> <ul style="list-style-type: none"> <li>Spare parts of equipment (Japan and Malawi)</li> <li>Fuel (Japan and Malawi)</li> <li>Materials for fish food for NAC and Kasinthula (Japan and Malawi)</li> <li>Fish food for on-farm research (Japan and Malawi)</li> <li>Allowances for seminars, meeting and others (Malawi)</li> </ul> <p><b>Others:</b></p> <ul style="list-style-type: none"> <li>Counterpart training in Japan (two persons per year for five years: 10 persons in total)</li> </ul>	<ul style="list-style-type: none"> <li>Serious drought/flooding do not occur</li> <li>Devaluation of MK does not occur</li> <li>Malawian government's commitment continues</li> <li>Willingness of other stakeholders to have collaboration continues</li> <li>The fund for aquaculture is permitted by Ministry of Finance</li> <li>The fund for aquaculture is managed properly</li> </ul> <p><b>Pre-condition</b></p> <ul style="list-style-type: none"> <li>Malawian government's commitment exists</li> <li>Malawian government assigns necessary personnel to the project</li> <li>Water supply for aquaculture research at NAC is ensured</li> </ul>

## 別添資料 4

### プロジェクト関連データ

投入実績

年次	1年目(平成11年度)				2年目(平成12年度)				3年目(平成13年度)				4年目(平成14年度)				5年目(平成15年度)			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
人 材 投 入	47.5 M/M				63 M/M				58 M/M				60 M/M				60 M/M			
	長期専 門家																			
短 期	3 M/M				8 M/M				2.5 M/M				5 M/M				2 M/M			
	当年度																			
供 与 機 材	○¥5,870千円 ルーツI7707、網地 高速度粉碎機他				○¥13,213千円 ステーションワゴン シンク、ルキヤビントラック 顕微鏡写真撮影装置				○¥5,381千円 濾過室付きFRP水槽 CCDカメラ モニター ミネラル添加剤				○¥10,585千円 紫外可視分光光度計 CODメーター 純水製造装置 DOメーター、3トラック ピックアップトラック				○¥8,650千円 魚網 実験・分析用器機 バッテリー ポンプ			
	線越																			
携 行 機 材	○約¥2,817千円 パソコン、プリンター、カメラ 遠心分離器、解剖セット				○約¥3,237千円 パソコン、プリンター、顕微鏡 水質測定器、養殖資材				○約¥1,219千円 ビデオレコーダー、パソコン デジカメ、スキャナー				○約3,441千円 レーザープリンター、薬品 エサ、描画機				○約1,982千円 ドラッグネット等			
	一般現地業務費 7,000千円 LLDC特別現地... 1,187千円				一般現地業務費 7,000千円 LLDC特別現地... 1,085千円 現地適用化活動費 560千円 安全対策費 2,456千円				一般現地業務費 6,345千円 LLDC特別現地... 1,080千円 特別対策セミナー費 5,292千円 現地適用化活動費 405千円 施設等整備費 7,500千円				一般現地活動費 11,608千円				一般現地活動費 14,425千円			
ローカルコスト 負担	応急対策費 1,109千円																			



短期専門家派遣実績

Title	Place	Name of Expert	Duration	1999				2000				2001				2002				2003							
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Seed Production	NAC	SAKAI Kiyoshi	1999/7/26 - 1999/8/21		-																						
Bilharzia Control	NAC	SASAKI Yumiko	1999/8/22 - 1999/10/20		-																						
Reeling Technics	NAC	YAGI Tomiyuki	2000/3/26 - 2000/7/26				-				-																
Plankton Taxonomy	NAC	OYA Futami	2000/10/8 - 2000/11/4				-				-																
Video Presentation for Aquaculture Technical Instruction	NAC	TSUDA Yoshio	2001/2/9 - 2001/4/9						-																		
Development of Malawian Indigenous	NAC	IOKA Chikara	2001/3/1 - 2001/3/28				-																				
Seminar Advisor in Aquaculture	NAC	SAKAMOTO Kikuo	2001/7/22 - 2001/8/18								-																
Plankton Propagation	NAC	SOUA Katsumasa	2001/10/21 - 2001/12/5								-																
Economic Survey of Agriculture Business	NAC	SOUA Katsumasa	2002/4/22 - 2002/7/10																						-		
Selective Breeding Technology on Aquaculture	NAC	YAMAZAKI Takayoshi	2002/7/15 - 2002/8/24																							-	
Feed Development and Technique of feeding experiment	NAC	YAMAMOTO Hiroshi	2003/2/4 - 2003/3/25																								-
Construction and operation of Drag Net for Large Eathen Aquaculture Pond	Kasintula	KITAMADO Tokio	2003/9/1 - 2003/9/30																								
Commercial Tilapia Farming in Earthen Pond	Kasintula	Hernando Boliver	2003/11/17 - 2003/12/16																								-

C/P研修実績

Course Name	Place	Trainee's Name	Duration	1999				2000				2001				2002				2003							
				1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
Fiseries Administration	Japan	S.A. Mapila	1999/10/31 - 1999/11/19																								
Fresh Water Aquaculture	The Philippines	S.B. Unyolo	1999/12/5 - 2000/2/28																								
General Fresh Water Aquaculture	Japan	H. Zidana	2000/2/22 - 2000/6/18																								
Fish seed production, Fish nutrition, Fish disease	The Philippines	I. Gondwe	2000/11/6 - 2001/3/4																								
Fresh Water Aquaculture	Japan	L. Chikoko	2001/2/20 - 2001/6/17																								
Fisheries Administration	Japan	O. Kachinjika	2001/3/8 - 2001/3/24																								
Seminar on "General Aquaculture"	Japan	Stanely Tegha	2002/3/28 - 2002/8/17																								
Senior on "Management of Adult Fish"	Japan	C.P. Likongwe	2002/3/28 - 2002/7/16																								
"Project Planning and Management in Participatory Local Social Development"	Japan	Bruno B. Chirwa	2002/9/30 - 2002/11/18																								
Fisheries Administration	Japan	George C. Mkondiwa	2002/11/4 - 2002/11/23																								
Sustainable Aquaculture Development	Japan	Leston Y. Phiri	2003/3/4 - 2003/7/13																								
Counterpart Training on Rearing Methods of Warm Water Fish	Japan	David G. Mbamba	2003/4/2 - 2003/7/8																								
Fresh Water Fish Culture	Japan	Richard P. Mkwandawire	2003/4/2 - 2003/10/3																								
Fish Feed Development	Japan	Cyprian H. Kagwira	2003/3/30 - 2003/10/3																								
Marine Farming for Stock Enhancement	Japan	Jessie Ntenjera	2003/6/9 - 2003/11/3																								
Training on Reeling Technics on Freshwater Fish Species	Japan	Francis Sidira Doris Nyirenda Sebaston Unyolo Ida Chimangeni Benson Lusangazi Innocent Thidza	2004/03/27 - 2004/05/01																								



供与機材一覽表

No.	F/Y	Date Received	Item	Model	Qty	Unit
1	1999	2000/2/16	DOUBLE CABIN TRUK	MITSUBISHI L200	1	UNIT
2	1999	2000/2/16	SPEERE PARTS FOR 1		1	SET
3	1999	2000/2/16	SINGLE CABIN TRUK	MITSUBISHI L100	1	UNIT
4	1999	2000/2/16	SPEERE PARTS FOR 2		1	SET
5	1999	2000/2/16	TETRON RUSSEL NET	T-180	4	PCS
6	1999	2000/2/16	TETRON RUSSEL NET	T-140	4	PCS
7	1999	2000/2/16	TETRON RUSSEL NET	T-90	4	PCS
8	1999	2000/2/16	TETRON RUSSEL NET	NS-4.5	4	PCS
9	1999	2000/2/16	POLIETHELENE NET	PE-200	2	PCS
10	1999	2000/2/16	POLIETHELENE NET	PE-150	2	PCS
11	1999	2000/2/16	POLIETHELENE NET	PE-100	2	PCS
12	1999	2000/2/16	NYLON NET	KNOTLESS	2	PCS
13	1999	2000/2/16	NYLON NET	KNOTLESS	2	PCS
14	1999	2000/2/16	NYLON NET	KNOTLESS	2	PCS
15	1999	2000/2/16	SINKER	BP-4-5	300	PCS
16	1999	2000/2/16	SINKER	BP-6-6	500	PCS
17	1999	2000/2/16	SINKER	BP-8-6	500	PCS
18	1999	2000/2/16	ROOTS BLOWER	RSS-32	1	UNIT
19	1999	2000/2/16	PULVERIZER	MPV-4	1	UNIT
20	1999	2000/2/16	PVC PIPE	VP100	10	PCS
21	1999	2000/2/16	PVC PIPE	VP50	20	PCS
22	1999	2000/2/16	PVC PIPE	VP40	20	PCS
23	1999	2000/2/16	PVC PIPE	VP25	20	PCS
24	1999	2000/2/16	PVC PIPE	VP20	50	PCS
25	1999	2000/2/16	PVC PIPE	VP16	20	PCS
26	1999	2000/2/16	BASKET	#150, 144L	15	PCS
27	1999	2000/2/16	BUCKET	50L	10	PCS
28	1999	2000/2/16	BUCKET	75L	10	PCS
29	1999	2000/2/16	BALANCE	SD-2 100G - 2KG	2	UNIT
30	1999	2000/2/16	BALANCE	SD-12 1KG - 12KG	2	UNIT
31	1999	2000/2/16	PETRI DISH CASE	2364	2	PCS
32	1999	2000/2/16	CHAIR	TS-120-G	10	PCS
33	1999	2000/2/16	BALANCE	D-50M, 50KG	1	UNIT
34	1999	2000/2/16	AUTOCLAVE	KT-23D	1	SET
35	1999	2000/2/16	CYLINDER	2550	3	PCS
36	1999	2000/2/16	CYLINDER	2551	3	PCS
37	1999	2000/2/16	CYLINDER	2553	3	PCS
38	1999	2000/2/16	CYLINDER	2556	3	PCS
39	1999	2000/2/16	FUNNEL	1101	5	PCS
40	1999	2000/2/16	FUNNEL	1103	5	PCS
41	1999	2000/2/16	FUNNEL	1105	5	PCS
42	1999	2000/2/16	FUNNEL	1106	5	PCS
43	1999	2000/2/16	CASE FOR PIPET	1202	1	PCS
44	1999	2000/2/16	SLIDE DISPENCER	9987	2	PCS
45	1999	2000/2/16	TRAY	2370	10	PCS
46	1999	2000/2/16	TUBE CONNECTOR	3532	10	PCS
47	1999	2000/2/16	TUBE CONNECTOR	3531	10	PCS
48	1999	2000/2/16	TUBE CONNECTOR	540	10	SET
49	1999	2000/2/16	TUBE CONNECTOR	3539	10	SET
50	1999	2000/2/16	BRANCH PIPE	ONE WAY	50	PCS
51	1999	2000/2/16	BRANCH PIPE	TWO WAY	50	PCS
52	1999	2000/2/16	BRANCH PIPE	THREE WAY	50	PCS
53	1999	2000/2/16	AIR STONE	NS-1B	100	PCS
54	1999	2000/2/16	HOLE SAW	SL-20	2	PCS
55	1999	2000/2/16	HOLE SAW	SL-25	2	PCS

No.	F/Y	Date Received	Item	Model	Qty	Unit
56	1999	2000/2/16	HOLE SAW	SL-30	2	PCS
57	1999	2000/2/16	HOLE SAW	SL-40	2	PCS
58	1999	2000/2/16	PVC ELBOW PIPE	L-100	10	PCS
59	1999	2000/2/16	PVC ELBOW PIPE	L-50	30	PCS
60	1999	2000/2/16	PVC ELBOW PIPE	L-40	30	PCS
61	1999	2000/2/16	PVC ELBOW PIPE	L-20	100	PCS
62	1999	2000/2/16	PVC T PIPE	T-50	30	
63	1999	2000/2/16	PVC T PIPE	T-40	30	PCS
64	1999	2000/2/16	PVC T PIPE	T-20	100	PCS
65	1999	2000/2/16	PVC T PIPE	RT20 X 16	50	
66	1999	2000/2/16	PVC SOCKET PIPE	S-50	30	PCS
67	1999	2000/2/16	PVC SOCKET PIPE	S-40	30	PCS
68	1999	2000/2/16	PVC SOCKET PIPE	S-20	100	PCS
69	1999	2000/2/16	PVC SOCKET PIPE	RS50 X 40	20	PCS
70	1999	2000/2/16	PVC SOCKET PIPE	RS40 X 20	20	PCS
71	1999	2000/2/16	PVC SOCKET PIPE	RS20 X 16	30	PCS
72	1999	2000/2/16	PVC CAP PIPE	CA-50	20	PCS
73	1999	2000/2/16	PVC CAP PIPE	CA-40	20	PCS
74	1999	2000/2/16	PVC CAP PIPE	CA-20	30	PCS
75	1999	2000/2/16	TS VALVE	VTCS50	10	PCS
76	1999	2000/2/16	TS VALVE	VTCS40	10	PCS
77	1999	2000/2/16	TS VALVE	VTCS20	30	PCS
78	1999	2000/2/16	TS VALVE	VTCS16	30	PCS
79	1999	2000/2/16	FLOAT	C-A5	500	PCS
80	1999	2000/2/16	FLOAT	C-7	500	PCS
81	1999	2000/2/16	ROPE	8MM X 100M	5	PCS
82	1999	2000/2/16	ROPE	6MM X 100MM	5	PCS
83	1999	2000/2/16	ROPE	10MM X 100MM	5	PCS
84	1999	2000/2/16	HOLE SLIDE GLASS	090103	50	PCS
85	1999	2000/2/16	HOLE SLIDE GLASS	090104	50	PCS
86	1999	2000/2/16	BOTTLE	BT-500	10	PCS
87	1999	2000/2/16	BOTTLE	BT-250	10	PCS
88	1999	2000/2/16	BOTTLE	BT-500	10	PCS
89	1999	2000/2/16	BOTTLE	BT-250	10	PCS
90	1999	2000/2/16	BOTTLE	BT-100	10	PCS
91	1999	2000/2/16	SYRINGE	SS-01	100	PCS
92	1999	2000/2/16	SYRINGE	SS-02	100	PCS
93	1999	2000/2/16	NEEDLE FOR SYRINGE	NN-2516	100	PCS
94	2000	2000/2/16	COPY MACHINE	CANON NP6512	1	UNIT
95	2000	2001/2/27	WAGON 4WD	PAJERO GL	1	UNIT
96	2000	2001/2/27	PICKUP TRUK	ISUZU TFS-55H	1	UNIT
97	2000	2001/3/19	TERMOMETER	0 -50°C	30	PCS
98	2000	2001/3/19	TERMOMETER	W/ METAL CASE	3	PCS
99	2000	2001/3/19	ELECTRONIC BALANCE	EK2000G	2	PCS
100	2000	2001/3/19	SCALE	SD2K	2	PCS
101	2000	2001/3/19	SCALE	SD12K	2	PCS
102	2000	2001/3/19	DRAW NET	1.5M X 30M	1	PCS
103	2000	2001/3/19	FISHING NET	MESH60MM	1	PCS
104	2000	2001/3/19	FISHING NET	MESH43MM	1	PCS
105	2000	2001/3/19	NETTING NEEDLE	NO.22	10	PCS
106	2000	2001/3/19	NETTING NEEDLE	NO.12	10	PCS
107	2000	2001/3/19	SINKER	15G	300	PCS
108	2000	2001/3/19	SINKER	22.5G	500	PCS
109	2000	2001/3/19	SINKER	30G	300	PCS
110	2000	2001/3/19	FLOAT	31ML	500	PCS
111	2000	2001/3/19	FLOAT	300ML	500	PCS
112	2000	2001/3/19	NET	DIFFERENT SQUARE	10	PCS

No.	F/Y	Date Received	Item	Model	Qty	Unit
113	2000	2001/3/19	NET	KING SIZE	10	PCS
114	2000	2001/3/19	NET	L SIZE	10	PCS
115	2000	2001/3/19	NET	M SIZE	10	PCS
116	2000	2001/3/19	NET	S SIZE	10	PCS
117	2000	2001/3/19	MEASURING APPARATUS	FS-600	1	PCS
118	2000	2001/3/19	GRADER		1	PCS
119	2000	2001/3/19	ARTEMIA INCUBATING TANK	SBF-50	2	PCS
120	2000	2001/3/19	AIR PUMP	AP-115RN	2	UNIT
121	2000	2001/3/19	PLANKTON NET	KITAHARA	2	PCS
122	2000	2001/3/19	PLANKTON NET	SYMPLE	2	PCS
123	2000	2001/3/19	BRANCH PIPE	3WAY CONNECT	10	PCS
124	2000	2001/3/19	BRANCH PIPE	3WAY COCK	20	PCS
125	2000	2001/3/19	BRANCH PIPE	3WAY BRANCH	3	PCS
126	2000	2001/3/19	AIR STONE	ROUND	30	PCS
127	2000	2001/3/19	AIR STONE	RECTANGLE	30	PCS
128	2000	2001/3/19	AIR STONE	COLUMN TYPE	30	PCS
129	2000	2001/3/19	OXYGEN REGURATOR		1	PCS
130	2000	2001/3/19	OXYGEN DIFFUSER	NO.2	5	PCS
131	2000	2001/3/19	WATER TANK	30L	10	PCS
132	2000	2001/3/19	WOOD WORKER TOOL		1	SET
133	2000	2001/3/19	ARTIFICIAL FEED	OTOHIME NO.1	1	UNIT
134	2000	2001/3/19	ARTIFICIAL FEED	OTOHIME S-NO.2	1	UNIT
135	2000	2001/3/19	ARTIFICIAL FEED	HIGH GROW	3	UNIT
136	2000	2001/3/19	METAL WORK TOOL		1	SET
137	2000	2001/3/19	PHOTOMICROGRAPHIC EQUIPMENT	H-III-35	1	SET
138	2000	2001/3/19	FIBER LIGHT SYSTEM		1	SET
139	2000	2001/3/19	ARM FOR LIGHT SYSTEM		1	PCS
140	2000	2001/3/19	WATER TEMP METER	3-3158-13	1	PCS
141	2000	2001/3/19	DESICCATOR	FHO-2	1	PCS
142	2000	2001/3/19	THERMOMETER	0 - 50°C	1	PCS
143	2000	2001/3/19	THERMOMETER	50 - 100°C	1	PCS
144	2000	2001/3/19	SIEVE	1.7MM	1	PCS
145	2000	2001/3/19	SIEVE	1.4MM	1	PCS
146	2000	2001/3/19	SIEVE	1.18MM	1	PCS
147	2000	2001/3/19	SIEVE	1.0MM	1	PCS
148	2000	2001/3/19	SIEVE	850 μ MM	1	PCS
149	2000	2001/3/19	SIEVE	710 μ MM	1	PCS
150	2000	2001/3/19	SIEVE	600 μ MM	1	PCS
151	2000	2001/3/19	SIEVE	500 μ MM	1	PCS
152	2000	2001/3/19	SIEVE	425 μ MM	1	PCS
153	2000	2001/3/19	SIEVE	355 μ MM	1	PCS
154	2000	2001/3/19	SIEVE	300 μ MM	1	PCS
155	2000	2001/3/19	SIEVE	250 μ MM	1	PCS
156	2000	2001/3/19	SIEVE	212 μ MM	1	PCS
157	2000	2001/3/19	SIEVE	180 μ MM	1	PCS
158	2000	2001/3/19	SIEVE	150 μ MM	1	PCS
159	2000	2001/3/19	SIEVE	125 μ MM	1	PCS
160	2000	2001/3/19	PH METER	HM-21P	1	SET
161	2000	2001/3/19	DO METER	DO-21P	1	SET
162	2000	2001/3/19	VERNIER CALIPER	N-15	1	PCS
163	2000	2001/3/19	VERNIER CALIPER	DIGITAL CD-15C	1	PCS
164	2000	2001/3/19	MAYONNAISE BOTTLE	70ML	100	PCS
165	2000	2001/3/19	MAYONNAISE BOTTLE	300ML	35	PCS
166	2000	2001/3/19	MAYONNAISE BOTTLE	900ML	20	PCS
167	2000	2001/3/19	SCREW VIAL	10ML	50	PCS
168	2000	2001/3/19	SCREW VIAL	15ML	50	PCS

No.	F/Y	Date Received	Item	Model	Qty	Unit
169	2000	2001/3/19	PIPETTE	1ML	10	PCS
170	2000	2001/3/19	PIPETTE	2ML	10	PCS
171	2000	2001/3/19	PIPETTE	5ML	10	PCS
172	2000	2001/3/19	PIPETTE	10ML	10	PCS
173	2000	2001/3/19	SPOID	1ML	10	PCS
174	2000	2001/3/19	SPOID	2ML	10	PCS
175	2000	2001/3/19	SPOID	5ML	10	PCS
176	2000	2001/3/19	SPOID	10ML	10	PCS
177	2000	2001/3/19	PASTEUR PIPETTE		1000	PCS
178	2000	2001/3/19	BEAKER	50ML	12	PCS
179	2000	2001/3/19	BEAKER	100ML	12	PCS
180	2000	2001/3/19	BEAKER	200ML	12	PCS
181	2000	2001/3/19	BEAKER	300ML	12	PCS
182	2000	2001/3/19	BEAKER	500ML	12	PCS
183	2000	2001/3/19	BEAKER	1000ML	12	PCS
184	2000	2001/3/19	PETRI DISH		50	PCS
185	2000	2001/3/19	HOLE SLIDE GLASS		50	PCS
186	2000	2001/3/19	COVER GLASS		1000	PCS
187	2000	2001/3/19	TEST TUBE SUPPORT		2	PCS
188	2000	2001/3/19	GLOVE	M	1000	PCS
189	2000	2001/3/19	GLOVE	L	1000	PCS
190	2000	2001/3/19	PAPER TOWEL		72	BOX
191	2000	2001/3/19	FISHING NET	ROUND	10	PCS
192	2000	2001/3/19	FISHING NET	HALF ROUND	10	PCS
193	2000	2001/3/19	FISHING NET	200KG	1	PCS
194	2000	2001/3/19	FISHING NET	120KG	1	PCS
195	2000	2001/3/19	FISHING NET	60KG	1	PCS
196	2000	2001/3/19	FISHING NET	N-11	1	PCS
197	2000	2001/3/19	FISHING NET	N-24	1	PCS
198	2000	2001/3/19	FISHING NET	Z-3	3	PCS
199	2000	2001/3/19	SHADING NET	NO.12	10	PCS
200	2000	2001/3/19	SHADING NET	NO.14	10	PCS
201	2000	2001/3/19	DRYING SHELF	DSC-C	1	PCS
202	2000	2001/3/19	ROPE	10MM X 100M	5	PCS
203	2000	2001/3/19	ROPE	12MM X 100M	5	PCS
204	2000	2001/3/19	ROPE	14MM X 100M	5	PCS
205	2000	2001/3/19	POLYETHYLENE NET	MS-40	1	PCS
206	2000	2001/3/19	POLYETHYLENE NET	MS-30	1	PCS
207	2000	2001/3/19	POLYETHYLENE NET	MS-24	1	PCS
208	2000	2001/3/19	TETRON NET	T-280	1	PCS
209	2000	2001/3/19	TETRON NET	T-90	1	PCS
210	2000	2001/3/19	TETRON NET	NS-4.5	1	PCS
211	2000	2001/3/19	CONTAINER	44.3L	10	PCS
212	2000	2001/3/19	FISH BASKET W/COVER	8K	5	PCS
213	2000	2001/3/19	CONTAINER	77.2L	3	PCS
214	2000	2001/3/19	CONTAINER	104L	3	PCS
215	2000	2001/3/19	BARREL W/COVER	NO.75	5	PCS
216	2000	2001/3/19	TANK	500L	1	PCS
217	2000	2001/3/19	TANK	1000L	1	PCS
218	2000	2001/3/19	RAIN WEAR	M	7	SET
219	2000	2001/3/19	RAIN WEAR	L	7	SET
220	2000	2001/3/19	FISHING BOOTS K TYPE	25CM	5	SET
221	2000	2001/3/19	FISHING BOOTS K TYPE	26CM	5	SET
222	2000	2001/3/19	FISHING BOOTS K TYPE	27CM	5	SET
223	2000	2001/3/19	FISHING BOOTS	25CM	3	SET
224	2000	2001/3/19	FISHING BOOTS	26CM	3	SET
225	2000	2001/3/19	FISHING BOOTS	27CM	3	SET

No.	F/Y	Date Received	Item	Model	Qty	Unit
226	2000	2001/3/19	GLOVES LONG	NO.500	20	SET
227	2000	2001/3/19	HATCHING JAR	MPC-6	2	PCS
228	2000	2001/3/19	BIRD NET	M920	1	PCS
229	2000	2001/3/19	TUBE	4 X 6MM	3	PCS
230	2000	2001/3/19	TUBE	7 X 10MM	3	PCS
231	2000	2001/3/19	LABORATORY TABLE	SAK-127	2	PCS
232	2000	2001/3/19	SHELF	SRD-127	1	PCS
233	2000	2001/3/19	LUBRICANT		1	PCS
234	2000	2001/3/19	METAL WORK TOOL	EA41	1	SET
235	2001	2002/9/13	FRP WATER TANK	W/FILTER TANK	2	UNIT
236	2001	2002/9/13	HEATER COOLER UNIT	WTCH-3752HR	1	UNIT
237	2001	2002/9/13	CCD COLOR CAMERA	TK-C1481EG	1	UNIT
238	2001	2002/9/13	COLOR VIDEO MONITOR	BM-H1400PN	1	UNIT
239	2001	2002/9/13	MINERAL PREPARATION		20	KG
240	2001	2002/9/13	VITAMIN PREPARATION		5	KG
241	2001	2002/9/13	FISHING BOOTS	28CM	5	SET
242	2001	2002/9/13	SIMPLE PLANKTON NET	PK 30	2	PCS
243	2001	2002/9/13	BOOK	AFRICAN ISLAND FISHERIES	1	PCS
244	2001	2002/9/13	BOOK	HANDBOOK ON INGREDIENTS FOR AQUACULTURE	1	PCS
245	2001	2002/9/13	POLYETHYLENE NET		2	PCS
246	2002	2003/4/26	MERCURY THERMOMETER	GI-0188-27	10	PCS
247	2002	2003/4/26	POLYETHYLENE	MS-24	5	PCS
248	2002	2003/4/26	PIT TAG SYSTEM	TX1400L	200	PCS
249	2002	2001/5/16	3TON TRUK	TOYOTA DYNA	1	UNIT
250	2002	2003/3/14	PICK UP TRUK	MITSUBISHI COLT	1	UNIT
251	2002	2003/4/26	WATER TANK	SPS-2000	1	PCS
252	2002	2003/4/26	CIRCLE BASE	CB-200	1	PCS
253	2002	2003/4/26	ARTEMIA INCUBATING TANK	SPS-2000	1	PCS
254	2002	2003/4/26	WATER TANK	PCE-1000	10	PCS
255	2002	2003/4/26	COD METER	NA-C031	1	UNIT
256	2002	2003/4/26	UV/VIS SPECTROPHOTOMETER	PERKIN ELMER	1	SET
257	2002	2003/4/26	QUARTZ CELL	22-476-01	4	PCS
258	2002	2003/4/26	QUARTZ CELL	22-477-01	24	PCS
259	2002	2003/4/26	FILTER HOLDER	SIBATA	4	PCS
260	2002	2003/4/26	MOMBRANE FILTER	ASONE JAWP04700	10	PCS
261	2002	2003/4/26	HOMOGENIZER	ASONE 5-5712-03	5	PCS
262	2002	2003/4/26	TWEEZERS FOR CELL	22-497-01	2	PCS
263	2002	2003/4/26	ULTRASONIC CLEANER	ASONE	1	PCS
264	2002	2003/4/26	LIQUID DETERGENT	ASONE	4	PAC
265	2002	2003/4/26	WATER DISTILLATION	ORGANO G-10C	1	UNIT
266	2002	2003/4/26	SOIL TESTER	ORBECO	1	UNIT
267	2002	2003/4/26	DO METER	TOKYO KAGAKU	1	UNIT
268	2002	2003/4/26	PH METER	TOKYO KAGAKU	1	UNIT
269	2002	2003/4/26	WATER SAMPLER		1	SET
270	2002	2003/4/26	WATER PURIFIER	SSX-880	2	UNIT
271	2002	2003/4/26	TITANIUM HEATER	TH2-1	10	PCS
272	2002	2003/4/26	THERMOSTAT	RL-200N	10	PCS
273	2002	2003/4/26	FISHING NET	N210D/32PLY	2	PCS
274	2002	2003/4/26	FISHING NET	N210D/32PLY	2	PCS
275	2002	2003/4/26	FISHING NET	120K	2	PCS
276	2002	2003/4/26	PVC PIPE	VW-VP20X4	50	PCS
277	2002	2003/4/26	PVC PIPE	VW-VP50X4	60	PCS
278	2002	2003/4/26	PIPE JOINT	T-16	50	PCS
279	2002	2003/4/26	PIPE JOINT	L-16	100	PCS

No.	F/Y	Date Received	Item	Model	Qty	Unit
280	2002	2003/4/26	PIPE JOINT	RS20X16	20	PCS
281	2002	2003/4/26	PIPE JOINT	RS25X20	20	PCS
282	2002	2003/4/26	PIPE JOINT	T25	30	PCS
283	2002	2003/4/26	PIPE JOINT	L25	50	PCS
284	2002	2003/4/26	PIPE JOINT	S25	50	PCS
285	2002	2003/4/26	PIPE JOINT	S16	50	PCS
286	2002	2003/4/26	SLIDE PROJECTOR	KODAK IIIA/J	1	UNIT
287	2002	2003/4/26	BOOK BINDER	KOKUYO GTS-2000	1	UNIT
288	2002	2003/4/26	BINIDING COVER	SA4B-0	100	PCS
289	2002	2003/4/26	BINIDING COVER	SA4B-3	100	PCS
290	2002	2003/4/26	BINIDING COVER	SA4B-6	50	PCS
291	2002	2003/4/26	BINIDING COVER	SA4B-9	50	PCS
292	2002	2003/4/26	BINIDING COVER	SA4B-12	50	PCS
293	2002	2003/4/26	BINIDING COVER	CA4B-0	50	PCS
294	2002	2003/4/26	BINIDING COVER	CA4B-3	50	PCS
295	2002	2003/4/26	BINIDING COVER	CA4B-6	30	PCS
296	2002	2003/4/26	BINIDING COVER	CA4B-9	30	PCS
297	2002	2003/4/26	BINIDING COVER	CA4B-12	30	PCS
298	2002	2003/4/26	CASE FILE	BLUE	30	PCS
299	2002	2003/4/26	CASE FILE	GREEN	30	PCS
300	2002	2003/4/26	CASE FILE	PINK	30	PCS
301	2002	2003/4/26	CASE FILE	YELLOW	30	PCS
302	2003	2004/1/9	Potassium Chloride	500g	1	BTL
303	2003	2004/1/9	Sulfuric Acid	500ml	20	BTL
304	2003	2004/1/9	Sodium Hydroxide	500g	1	BTL
305	2003	2004/1/9	Ethanol	500ml	25	BTL
306	2003	2004/1/9	Ethylenediamine-tetraacetic Acid Disodium Salt Dihydrate	500g	1	BTL
307	2003	2004/1/9	Ammonia Solution	500ml	10	BTL
308	2003	2004/1/9	Sodium Thiosulfate Pentahydrate	500g	2	BTL
309	2003	2004/1/9	Sodium Nitrite	500g	1	BTL
310	2003	2004/1/9	Chloroform	500ml	1	BTL
311	2003	2004/1/9	Hydrochloride Acid	500ml	10	BTL
312	2003	2004/1/9	Sodium Chloride	500g	1	BTL
313	2003	2004/1/9	L(+)-Ascorbic Acid	500g	1	BTL
314	2003	2004/1/9	Acetone	500ml	4	BTL
315	2003	EAT on 2004/4/12	FISHING NET	210D/54, 60MM	1	PCS
316	2003	EAT on 2004/4/12	FISHING NET	210D/33, 50MM	1	PCS
317	2003	EAT on 2004/4/12	FISHING NET	210D/21, 30MM	1	PCS
318	2003	EAT on 2004/4/12	NET LINE	210D/54	20	ROLL
319	2003	EAT on 2004/4/12	NET LINE	210D/33	12	ROLL
320	2003	EAT on 2004/4/12	NET LINE	210D/21	8	ROLL
321	2003	EAT on 2004/4/12	NETTING NEEDLE	NO.4	10	PCS
322	2003	EAT on 2004/4/12	NETTING NEEDLE	NO.10	10	PCS
323	2003	EAT on 2004/4/12	NETTING NEEDLE	NO.20	10	PCS
324	2003	EAT on 2004/4/12	ROPE	14MM X 100M	3	PCS
325	2003	EAT on 2004/4/12	ROPE	12MM X 100M	3	PCS
326	2003	EAT on 2004/4/12	ROPE	4MM X 100M	6	PCS
327	2003	EAT on 2004/4/12	FLOAT	310GF	200	PCS
328	2003	EAT on 2004/4/12	FLOAT	10GF	50	PCS
329	2003	EAT on 2004/4/12	SINKER	22.5G	500	PCS
330	2003	EAT on 2004/4/12	FISHING NET	W1.21M X L50M	5	PCS
331	2003	EAT on 2004/4/12	PLASTIC CONTAINER	500L	2	PCS
332	2003	EAT on 2004/4/12	COOLER CONTAINER	550L	2	PCS
333	2003	EAT on 2004/4/12	THERMOMETER	-20 TO +50	20	PCS
334	2003	EAT on 2004/4/12	WATER PROOF WEAR	SEPARATE S	10	SET
335	2003	EAT on 2004/4/12	WATER PROOF WEAR	SEPARATE M	10	SET

No.	F/Y	Date Received	Item	Model	Qty	Unit
336	2003	EAT on 2004/4/12	WATER PROOF WEAR	SEPARATE L	10	SET
337	2003	EAT on 2004/4/12	WEDER	26CM	10	PCS
338	2003	EAT on 2004/4/12	WEDER	27CM	10	PCS
339	2003	EAT on 2004/4/12	WEDER	28CM	10	SET
340	2003	EAT on 2004/4/12	BOOTS	26CM	10	SET
341	2003	EAT on 2004/4/12	BOOTS	27CM	10	SET
342	2003	EAT on 2004/4/12	BOOTS	28CM	10	SET
343	2003	EAT on 2004/4/12	RUBBER BOOTS	24CM	10	SET
344	2003	EAT on 2004/4/12	RUBBER BOOTS	25CM	10	SET
345	2003	EAT on 2004/4/12	RUBBER BOOTS	26CM	10	SET
346	2003	EAT on 2004/4/12	RUBBER BOOTS	27CM	10	SET
347	2003	EAT on 2004/4/12	RUBBER GLOVE	NO.660	30	SET
348	2003	EAT on 2004/4/12	MEMBRANE FILTER	FOR CHLOROFIL	500	PCS
349	2003	EAT on 2004/4/12	TAPE MEASURE	50M	1	PCS
350	2003	EAT on 2004/4/12	COUNTER	H-102	20	PCS
351	2003	EAT on 2004/4/12	DO ELECTRODE		1	SET
352	2003	EAT on 2004/4/12	DO MEMBRANE KIT		5	SET
353	2003	EAT on 2004/4/12	PH ELECTRODE		1	PCS
354	2003	EAT on 2004/4/12	VACUUME PUMP	MANUAL	1	UNIT
355	2003	EAT on 2004/4/12	FLASH LIGHT	HAROGEN	2	PCS
356	2003	EAT on 2004/4/12	BATTERY	NiH	4	PCS
357	2003	EAT on 2004/4/12	BATTERY CHARGER	230V 50HZ	2	PCS
358	2003	EAT on 2004/4/12	MAGNETIC STIRRER	CT-3	1	SET
359	2003	EAT on 2004/4/12	DESICATOR	SHIBATA 1743-250	1	SET
360	2003	EAT on 2004/4/12	MORTAR	50 X 40 X 30	5	SET
361	2003	EAT on 2004/4/12	VOLUMETRIC PIPETTE	20ML	5	PCS
362	2003	EAT on 2004/4/12	VOLUMETRIC PIPETTE	10ML	10	PCS
363	2003	EAT on 2004/4/12	VOLUMETRIC PIPETTE	5ML	10	PCS
364	2003	EAT on 2004/4/12	VOLUMETRIC PIPETTE	2ML	10	PCS
365	2003	EAT on 2004/4/12	VOLUMETRIC PIPETTE	1ML	10	PCS
366	2003	EAT on 2004/4/12	VOLUMETRIC FLASK	1000ML	6	PCS
367	2003	EAT on 2004/4/12	VOLUMETRIC FLASK	500ML	6	PCS
368	2003	EAT on 2004/4/12	VOLUMETRIC FLASK	100ML	10	PCS
369	2003	EAT on 2004/4/12	VOLUMETRIC FLASK	50ML	10	PCS
370	2003	EAT on 2004/4/12	GRADUATED CYLINDER	1000ML	1	PCS
371	2003	EAT on 2004/4/12	GRADUATED CYLINDER	500ML	2	PCS
372	2003	EAT on 2004/4/12	GRADUATED CYLINDER	200ML	4	PCS
373	2003	EAT on 2004/4/12	GRADUATED CYLINDER	100ML	10	PCS
374	2003	EAT on 2004/4/12	GRADUATED CYLINDER	10ML	10	PCS
375	2003	EAT on 2004/4/12	BURETTE	50ML	2	PCS
376	2003	EAT on 2004/4/12	BURETTE	25ML	2	PCS
377	2003	EAT on 2004/4/12	BURETTE STAND	2CLIPS	4	PCS
378	2003	EAT on 2004/4/12	SPOON	150MM	22	PCS
379	2003	EAT on 2004/4/12	SPOON	165MM	22	PCS
380	2003	EAT on 2004/4/12	SPOON	180MM	22	PCS
381	2003	EAT on 2004/4/12	SPOON	210MM	11	PCS
382	2003	EAT on 2004/4/12	PIPETTE AID	50ML	7	PCS
383	2003	EAT on 2004/4/12	SPOID	1G	11	PCS
384	2003	EAT on 2004/4/12	SPOID	2G	11	PCS
385	2003	EAT on 2004/4/12	SPOID	5G	11	PCS
386	2003	EAT on 2004/4/12	SPOID	10G	11	PCS
387	2003	EAT on 2004/4/12	BERKER	1000ML	12	PCS
388	2003	EAT on 2004/4/12	BERKER	500ML	12	PCS
389	2003	EAT on 2004/4/12	BERKER	300ML	24	PCS
390	2003	EAT on 2004/4/12	BERKER	100ML	36	PCS
391	2003	EAT on 2004/4/12	ERLENMEYER FLASK	300ML	24	PCS
392	2003	EAT on 2004/4/12	ERLENMEYER FLASK	200ML	24	PCS

No.	F/Y	Date Received	Item	Model	Qty	Unit
393	2003	EAT on 2004/4/12	WASH BOTTLE	500ML	10	PCS
394	2003	EAT on 2004/4/12	SPOID BOTTLE	100ML CLEARE	12	PCS
395	2003	EAT on 2004/4/12	SPOID BOTTLE	100ML DARK	12	PCS
396	2003	EAT on 2004/4/12	REAGENT BOTTLE	1000ML CLEARE	12	PCS
397	2003	EAT on 2004/4/12	REAGENT BOTTLE	500ML CLEARE	6	PCS
398	2003	EAT on 2004/4/12	REAGENT BOTTLE	250ML CLEARE	6	PCS
399	2003	EAT on 2004/4/12	REAGENT BOTTLE	120ML CLEARE	6	PCS
400	2003	EAT on 2004/4/12	REAGENT BOTTLE	1000ML DARK	3	PCS
401	2003	EAT on 2004/4/12	REAGENT BOTTLE	500ML DARK	3	PCS
402	2003	EAT on 2004/4/12	REAGENT BOTTLE	250ML DARK	3	PCS
403	2003	EAT on 2004/4/12	REAGENT BOTTLE	120ML DARK	3	PCS
404	2003	EAT on 2004/4/12	POLYETHYLENE BOTTLE	2L	20	PCS
405	2003	EAT on 2004/4/12	POLYETHYLENE BOTTLE	1L	70	PCS
406	2003	EAT on 2004/4/12	FILTER HOLDER SET		2	SET
407	2003	EAT on 2004/4/12	WRAP FILM	PARAFIN	12	ROLL
408	2003	EAT on 2004/4/12	QUALITATIVE FILTER PAPER	150MM	1000	PCS
409	2003	EAT on 2004/4/12	TEST TUBE	24 X 200MM	100	PCS
410	2003	EAT on 2004/4/12	TEST TUBE	16.5 X 160MM	200	PCS
411	2003	EAT on 2004/4/12	TEST TUBE RACK	50 HOLLS	2	PCS
412	2003	EAT on 2004/4/12	TEST TUBE RACK	50 HOLLS	2	PCS
413	2003	EAT on 2004/4/12	SILICON PLUG	23 X 20MM	55	PCS
414	2003	EAT on 2004/4/12	SILICON PLUG	19 X 15 MM	55	PCS
415	2003	EAT on 2004/4/12	FUNNEL	PLYLOPYLENE	24	PCS
416	2003	EAT on 2004/4/12	POWDER FUNNEL	GLASS	4	PCS
417	2003	EAT on 2004/4/12	CENTRIFUGAL MILL	ZM-100	1	SET
418	2003	EAT on 2004/4/12	SIEVE SHAKER W/SIEVES	2800RPM	1	SET
419	2003	EAT on 2004/4/12	RASSEL NET	6 X 6MM	2	PCS
420	2003	EAT on 2004/4/12	RASSEL NET	3.3 X 3.3MM	4	PCS
421	2003	EAT on 2004/4/12	CD-RW	700MB	50	PCS
422	2003	EAT on 2004/4/12	CD-R	700MB	50	PCS
423	2003	EAT on 2004/4/12	INK CARTRIDGE	BK05W	5	BOX
424	2003	EAT on 2004/4/12	INK CARTRIDGE	IC5CL05W	5	BOX
425	2003	EAT on 2004/4/12	INK CARTRIDGE	HP51645AA	10	PCS
426	2003	EAT on 2004/4/12	INK CARTRIDGE	C1823DA	10	PCS
427	2003	EAT on 2004/4/12	INK CARTRIDGE	BCI-11 C	12	BOX
428	2003	EAT on 2004/4/12	INK CARTRIDGE	BCI-11 B	12	BOX
429	2003	EAT on 2004/4/12	INK CARTRIDGE	BCI-10	12	BOX
430	2003	EAT on 2004/4/12	FLOPPY DISK	IBM FORMATTED	20	BOX
431	2003	EAT on 2004/4/12	PHOTO SENSITIVE UNIT	FOR LP200C	1	UNIT
432	2003	EAT on 2004/4/12	FIXING OIL ROLL	FOR LP200C	1	UNIT
433	2003	EAT on 2004/4/12	WASTE TONER BOX	FOR LP200C	1	PCS
434	2003	EAT on 2004/4/12	MEMORY	FOR LP200C	1	PCS