

APPENDIX -7

NATURAL CONDITIONS IN THE PRIORITY ZONES

7-1 BIMA PRIORITY ZONE

7-2 DOMPU PRIORITY ZONE

7-3 EASTERN FLORES PRIORITY ZONE

7-4 CENTRAL FLORES PRIORITY ZONE

APPENDIX – 7: NATURAL CONDITION AT PROJECT SITE

1. Bima Area

Table 7.1.1 Monthly Climate in Bima, 1999

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainy days	16	19	17	18	3	3	1	1	0	5	10	19
Rain hours	136	132	172	140	32	33	9	9	43	76	242	240
Rain fall (mm)	228	261	201	341	20	21	7	3	1	33	117	265
Average temp. (°C)	26.8	26.7	27.9	26.7	25.8	25.5	25.4	25.8	26.8	28.1	27.4	27.9
Max. temp. (°C)	23.5	23.1	23.2	22.6	20.0	19.1	18.5	19.3	21.3	23.7	24.0	24.0
Min. temp. (°C)	32.2	32.0	32.1	32.5	32.2	32.0	31.9	33.1	34.4	35.3	32.8	33.3
Ave. humidity (%)	88	84	86	86	81	80	76	73	73	75	82	83
Ave. wind speed (m/s)	1	2	2	2	4	4	5	5	5	4	3	2
Max. wind speed (m/s)	9	9	9	10	13	12	14	14	15	14	11	11
Wind direction	N/S	N	N/S	S	S	S	S	S	S	S	S	N/W

Source: DARAM ANGKA in BIMA 1999

Table 7.1.2 Average Number of Rainy Days in Bima, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Monta	15	15	16	16	8	5	3	2	5	4	22	21	132
Bolo	11	11	9	16	2	3	4	7	4	5	21	14	107
Woha	15	13	9	12	6	6	-	-	4	11	20	21	117
Belo	10	10	14	16	-	-	1	1	3	10	19	13	97
Wawo	6	10	17	12	3	9	-	-	5	6	17	17	102
Sape	9	8	4	4	1	2	-	-	-	2	6	15	51
Wera	6	5	9	7	-	-	-	-	-	4	9	15	55
Rasanae Timur	15	23	15	21	5	5	2	2	8	19	26	20	161
Rasanae Barat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sanggar	19	9	10	15	3	5	3	4	2	7	17	13	107
Donngo	11	12	16	15	3	5	-	-	5	20	27	22	136
Average	11.7	11.6	11.9	13.4	3.1	4.0	1.3	1.6	3.6	8.8	18.4	17.1	107

Source: DARAM ANGKA in BIMA 1999

Table 7.1.3 Average Number of rain Fall in Bima, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Monta	203	66	190	181	29	18	26	27	45	27	286	247	1,345
Bolo	126	133	148	156	15	33	29	29	37	64	180	129	1,079
Woha	319	264	180	53	118	37	-	-	103	104	345	415	1,938
Belo	119	117	182	167	-	-	3	3	75	126	256	125	1,173
Wawo	72	121	439	174	60	73	-	-	40	113	332	470	1,894
Sape	119	125	30	79	20	9	-	-	-	15	27	214	638
Wera	92	41	90	119	-	-	-	7	-	25	24	282	680
Rasanae Timur	197	353	337	292	55	84	-	-	94	196	726	396	2,730
Rasanae Barat	-	-	-	-	-	-	-	-	-	-	-	-	-
Sanggar	97	72	103	153	23	48	34	34	17	42	189	91	903
Donngo	14	28	19	21	3	15	-	-	15	53	59	29	256
Average	136	132	172	140	32	33	9	9	43	76	242	240	1,264

Source: DARAM ANGKA in BIMA 1999

2. Dompu Area

Table 7.2.1 Average Number of Rainy Days in Dompu, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hu'u	20	24	18	22	-	-	-	-	-	7	15	20	126
Dompu	15	19	17	16	-	-	-	-	-	10	13	14	104
Kempo	26	20	22	21	-	-	-	-	-	9	2	18	118
Kilo	25	25	24	23	-	-	-	-	-	7	11	19	134
Woja	14	18	17	16	-	-	-	-	3	10	5	13	96
Average	20.0	21.2	19.6	19.6	0	0	0	0	0.6	8.6	9.2	16.8	116

Source: DARAM ANGKA in DOMPU 1999

Table 7.2.2 Average Number of Rain Fall, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Hu'u	247	243	569	115	-	-	-	-	-	151	304	304	1,933
Dompu	239	187	210	183	-	-	-	-	-	190	219	262	1,490
Kempo	242	290	253	190	-	-	-	-	-	118	15	150	1,258
Kilo	162	183	228	207	-	-	-	-	-	92	157	200	1,229
Woja	215	155	182	146	-	-	-	-	20	165	33	245	1,261
Average	221	212	288	168	0	0	0	0	4	143	146	232	1,414

Source: DARAM ANGKA in DOMPU 1999

Table 7.2.3 Average Number of Rain Fall Last 5 Years

Kecamatan	1995	1996	1997	1998	1999	Average
Hu'u	83	105	69	181	282	144
Dompu	75	107	41	175	213	122
Kempo	49	56	40	143	180	94
Kilo	34	56	42	119	176	85
Woja	-	-	-	181	145	65
Average	60	81	48	160	199	102

Source: DARAM ANGKA in DOMPU 1999

3. East Flores Area

Table 7.3.1 Average Number of Rainy Days in East Flores, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wulan Gitang	17	24	23	22	0	3	-	0	0	8	13	22	143
Tanjung Bunga	17	24	17	7	2	3	0	1	0	2	11	-	84
Larantuka	17	23	16	6	1	3	1	0	0	5	10	21	103
Solor Barat	19	22	14	7	0	-	0	0	0	2	8	17	89
Solor Timur	21	22	13	16	2	0	0	0	0	7	9	23	113
Adonara Barat	20	17	12	8	1	3	0	0	0	3	3	13	80
Adonara Timur	18	19	16	11	1	0	0	1	0	5	7	16	94
Average	19.9	21.6	15.9	11.0	1.0	11.0	0.3	0.3	0	4.6	8.7	16.0	100.9

Source: DARAM ANGKA in FLORES TIMUR 1999

Table 7.3.2 Average Number of Rain Fall in East Flores, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Wulan Gitang	491	472	500	424	0	14	10	0	0	126	219	431	2,687
Tanjung Bunga	339	473	265	148	13	20	0	0	0	28	165	-	1,451,
Larantuka	389	674	132	211	23	24	4	0	0	20	92	409	1,978
Solor Barat	135	173	155	82	0	0	0	0	0	24	24	204	797
Solor Timur	158	208	93	189	2	0	0	3	0	28	35	259	975
Adonara Barat	247	183	142	137	16	55	0	0	0	42	47	186	1,055
Adonara Timur	231	296	204	199	23	0	0	4	0	52	123	158	1,290
Average	284	354	213	199	11	16	2	1	0	46	101	235	1,462

Source: DARAM ANGKA in FLORES TIMUR 1999

Table 7.3.3 Average Number of Rainy Days in Lembata,

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Nagawutun	9	8	10	5	3	1	-	-	2	6	8	9	61
Atadei	10	15	12	5	4	2	1	3	2	4	6	9	73
Ile Ape	5	12	9	2	-	1	1	2	3	4	3	8	50
Lebatukan	6	12	13	3	3	2	1	1	1	4	8	9	63
Nubatukan	8	15	13	4	1	3	1	2	1	5	9	6	68
Omesuri	12	15	12	4	2	1	1	1	-	5	6	8	67
Buyasuri	14	14	13	4	3	2	-	3	1	4	4	6	68
Average	9.1	13.0	11.7	3.9	2.9	1.7	0.7	1.7	1.4	4.6	6.3	7.9	64.3

Source: DARAM ANGKA in LEMBATA 1999

Table 7.3.4 Average Number of Rain Fall in lembata,

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Nagbawutun	142	116	318	89	67	8	-	-	12	199	121	126	1,198
Atadei	156	186	246	78	59	9	11	10	3	97	111	121	1,087
Ile Ape	115	142	141	24	-	6	4	8	3	47	52	83	625
Lebatukan	112	181	214	57	34	8	3	3	-	34	85	97	828
Nubatukan	140	170	201	74	16	11	6	7	6	61	99	103	894
Omesuri	167	176	198	68	28	21	15	8	3	71	81	91	927
Buyasuri	194	164	217	65	37	37	-	10	4	62	71	89	950
Average	147	162	219	65	34	14	6	7	4	82	89	101	930

Source: DARAM ANGKA in LEMBATA 1999

4. Central Flores Area

Table 7.4.1 Monthly Climate in Sikka, 1999

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Rainy days	21.9	17.1	13.2	9.1	2.5	4.0	-	1.0	-	5.0	8.6	17.3
Rain fall (mm)	337	394	222	90	6	24	-	4	-	66	127	342
Ave. Temp. ()	26.7	26.2	26.8	27.2	26.5	26.5	26.0	26.3	27.0	28.4	28.4	27.3
Min. Temp. ()	23.3	22.7	22.8	21.8	21.4	20.8	19.8	20.0	20.0	22.6	23.8	23.2
Max. Temp. ()	31.6	31.0	32.0	32.8	32.6	33.0	34.0	34.0	34.8	35.6	34.2	33.1
Humidity (%)	87	89	86	82	73	74	69	70	71	71	76	84
Max. wind speed (m/s)	15	18	15	12	16	16	15	14	15	16	18	18
Wind direction	calm	calm	calm	cCal m	SW	SW	S	SW	S	SW	calm	calm

Source: DARAM ANGKA in SIKKA 1999

Table 7.4.2 Average Number of Rainy Days in Sikka, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Paga	16	9	11	8	-	-	-	-	-	3	6	16	69
Iedalero	17	19	14	7	-	-	-	-	-	6	77	15	85
Magepanda	13	16	15	3	-	-	-	-	-	4	6	11	68
Maumere	7	17	9	5	-	3	-	-	-	3	5	11	60
Lela	26	20	20	21	3	7	-	1	-	9	13	24	144
Habi	24	21	15	15	-	-	-	-	-	4	13	26	118
Ogalidi	31	16	14	-	-	-	-	-	-	10	6	19	96
Waigete	46	21	14	8	2	-	-	-	-	1	8	14	114
Patiahu	17	15	7	6	-	2	-	-	-	5	13	20	85
Average	21.9	17.1	13.2	9.1	2.5	4.0	-	1.0	-	5.0	8.6	17.3	93.2

Source: DARAM ANGKA in SIKKA 1999

Table 7.4.3 Average Number of Rainy Days in Sikka, 1999

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Paga	583	460	412	117	-	-	-	-	-	36	168	719	2,495
Iedalero	430	301	273	83	-	-	-	-	-	33	171	432	1,723
Magepanda	272	134	80	2	-	-	-	-	-	0	114	144	746
Maumere	131	298	165	57	-	8	-	-	-	36	52	217	964
Lela	292	995	364	123	1	59	-	4	-	89	147	314	2,388
Habi	337	283	193	46	-	8	-	-	-	23	60	214	1,164
Ogalidi	244	218	151	161	-	-	-	-	-	358	83	379	1,594
Waigete	257	361	227	187	10	-	-	-	-	16	84	127	1,269
Patiahu	486	500	134	37	-	20	-	-	-	0	267	536	1,980
Average	337	394	222	90	6	24	-	4	-	66	127	342	1,591

Source: DARAM ANGKA in SIKKA 1999

Table 7.4.4 Monthly Climate in Ende, 1999

Item	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Ave. Temp. ()	28.5	28.4	28.1	28.4	27.0	26.8	26.8	26.0	27.2	28.2	28.6	28.9
Min. Temp. ()	24.0	24.5	24.0	24.5	21.5	23.0	23.0	21.0	22.0	24.0	24.5	25.0
Max. Temp. ()	32.0	32.0	32.0	33.0	30.5	30.0	30.0	30.0	31.0	32.0	31.5	33.0
Humidity (%)	88.3	86.0	89.6	87.1	84.1	85.1	82.5	82.9	83.6	85.3	87.4	86.5
Wind speed (m/s)	4	1-4	-	1-2	2-5	2-5	3-4	2-4	2-4	2	-	-

Source: DARAM ANGKA in ENDE 1999

Table 7.4.5 Average Number of Rainy Days in Ende, 1999

ecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Nangapanda	17	21	19	7	-	5	-	1	-	9	4	23	106
Ende	-	-	-	-	-	-	-	-	-	-	-	-	-
Ende Selatan	18	16	18	8	-	3	-	3	3	4	14	16	103
Ndona	14	12	18	11	-	5	-	2	-	1	13	18	94
Wolowaru	19	19	16	17	-	8	-	-	-	10	19	20	128
Maurole	30	15	13	14	-	3	-	2	-	11	14	22	124
Detusoko	25	23	20	14	-	5	-	2	1	4	3	22	119
Average	20.5	17.7	17.3	10.1	-	4.8	-	1.7	0.7	6.5	11.2	20.2	112

Source: DARAM ANGKA in ENDE 1999

Table 7.4.6 Average Number of Rain Fall in Ende,

Kecamatan	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
Nangapanda	268	315	206	86	-	46	-	4	-	112	46	205	1,287
Ende	-	-	-	-	-	-	-	-	-	-	-	-	-
Ende Selatan	222	164	216	96	-	8	-	4	18	27	99	533	1,387
Ndona	115	80	353	413	-	6	-	7	-	2	570	249	1,296
Wolowaru	251	192	244	257	-	49	-	-	-	128	375	194	1,690
Maurole	468	202	275	110	-	6	-	76	-	147	131	319	1,734
Detusoko	544	311	213	242	-	25	-	23	-	101	203	501	2,090
Average	311	211	251	201	-	23	-	19	3	86	209	334	1,581

Source: DARAM ANGKA in ENDE 1999

Table 7-4-7

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -January-

SUM,Jan	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0 * V * 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 * V * 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 * V * 3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 * V * 4	27	4	3	4	0	1	1	1	0	2	6	2	4	0	1	0
4 * V * 5	25	6	6	1	0	1	0	0	0	4	2	5	0	0	2	2
5 * V * 6	6	1	2	2	0	0	0	0	3	2	5	2	2	0	0	4
6 * V * 7	6	1	0	0	0	0	0	0	0	1	1	0	0	0	0	3
7 * V * 8	2	0	1	0	0	0	0	0	0	1	2	0	0	1	0	3
8 * V * 9	8	0	1	0	0	0	0	0	0	2	0	0	0	1	2	4
9 * V * 10	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 * V * 11	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0	0
11 * V * 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 * V * 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 * V * 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	78	14	13	7	0	2	1	1	3	12	16	9	7	2	5	16
Wind speed	5	4	5	4	0	4	3	3	5	5	4	4	5	8	5	6
Ratio	42	8	7	4	0	1	1	1	2	7	9	5	4	1	3	9

186
100

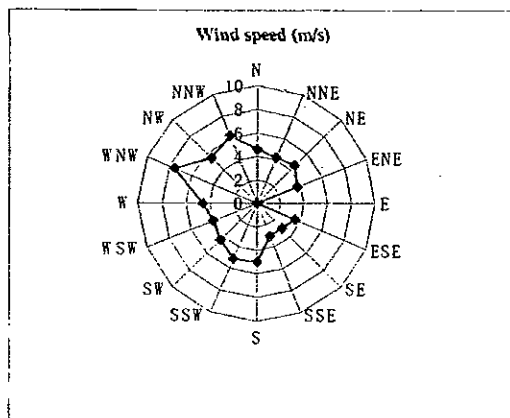
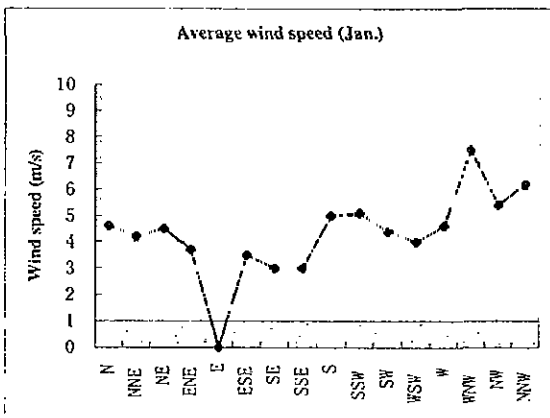
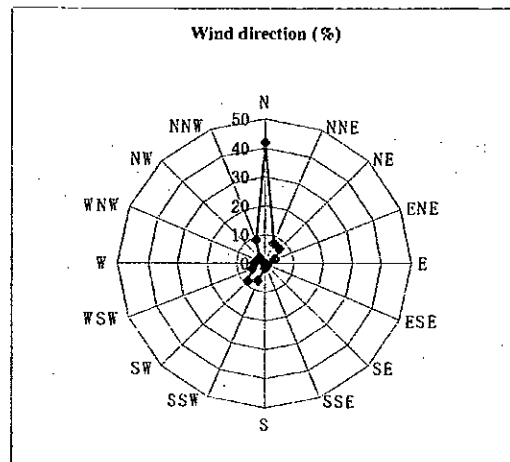
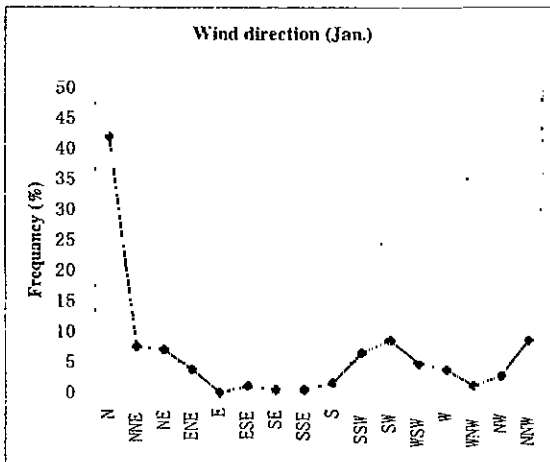


Table 7-4-8

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -February-

SUM, Feb	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0° V 1'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1° V 2'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2° V 3'	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3° V 4'	20	10	3	4	1	0	0	0	1	1	2	1	2	2	1	7
4° V 5'	19	5	3	3	0	0	0	0	2	1	4	1	0	1	0	6
5° V 6'	5	3	1	0	0	0	0	0	2	1	1	1	0	0	0	9
6° V 7'	11	0	0	0	0	0	0	0	0	1	3	0	0	0	1	1
7° V 8'	2	0	0	0	0	0	0	0	0	1	0	0	0	0	1	1
8° V 9'	8	2	1	0	0	0	0	0	0	0	0	0	0	0	1	5
9° V 10'	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
10° V 11'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11° V 12'	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
12° V 13'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13° V 14'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	70	20	8	7	1	0	0	0	5	5	10	4	2	3	4	30
Wind speed	5	4	4	3	3	0	0	0	4	5	5	6	3	3	6	5
Ratio	41	12	5	4	1	0	0	0	3	3	6	2	1	2	2	18

169
100

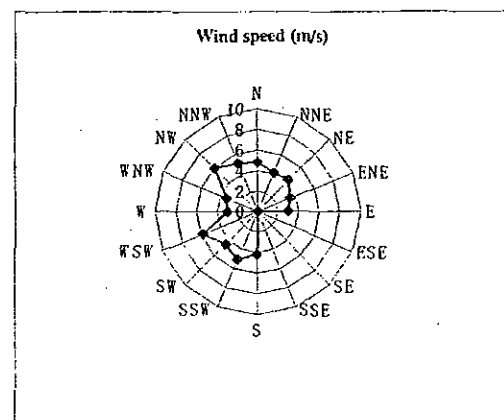
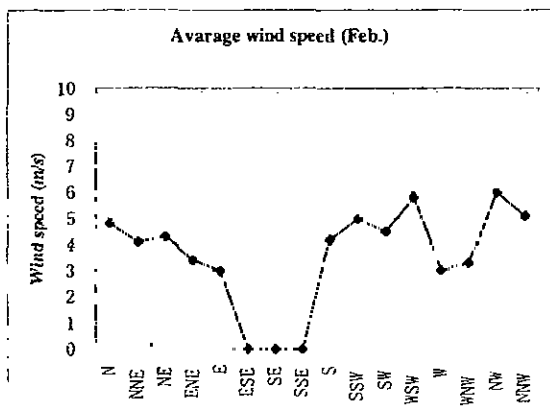
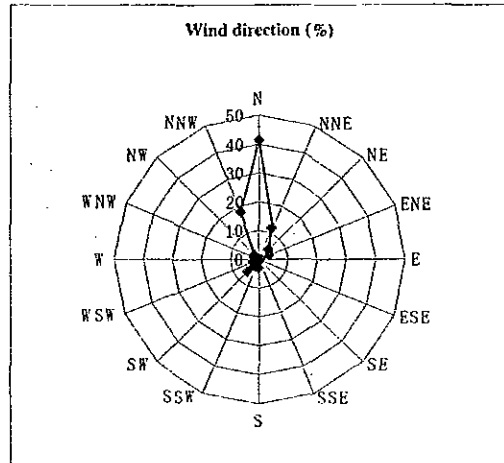
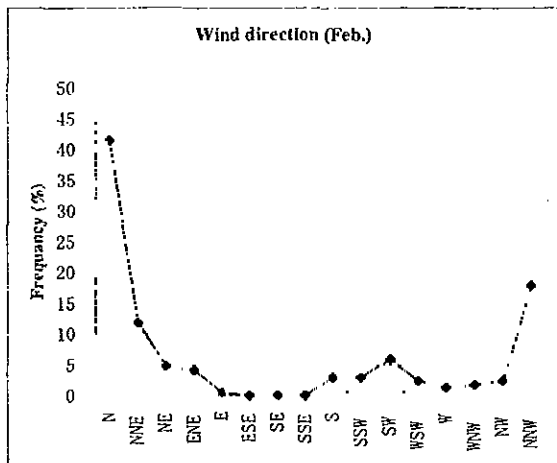


Table 7-4-9

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -March-

SUM,Mar	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0° V 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1° V 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2° V 3	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
3° V 4	29	2	7	1	2	0	1	1	1	1	8	1	2	2	1	5
4° V 5	25	2	0	4	0	0	0	1	2	2	9	7	2	0	2	4
5° V 6	7	2	0	1	1	0	0	0	3	3	7	3	0	0	0	3
6° V 7	4	0	0	0	0	0	0	0	1	1	6	1	0	0	0	2
7° V 8	3	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
8° V 9	4	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0
9° V 10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	2
10° V 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
11° V 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12° V 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13° V 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	73	6	9	6	3	0	1	2	7	8	30	12	4	2	5	18
Wind speed	4	4	3	4	4	0	3	4	5	5	4	4	4	3	6	5
Ratio	39	3	5	3	2	0	1	1	4	4	16	7	2	1	3	10

186
100

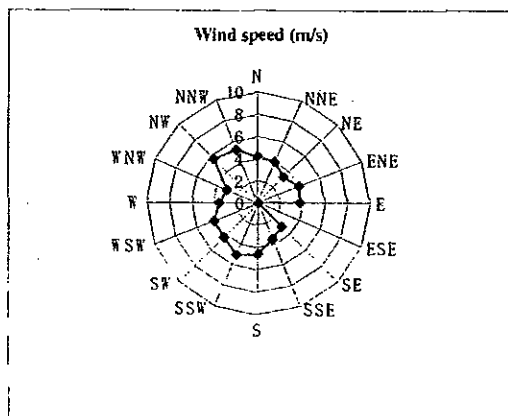
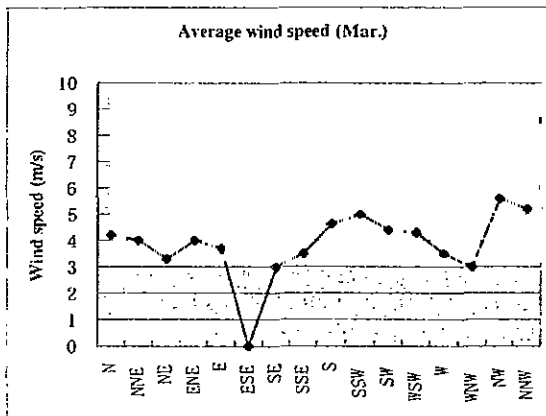
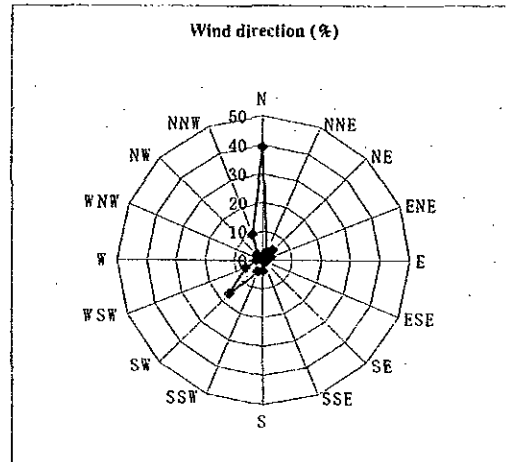
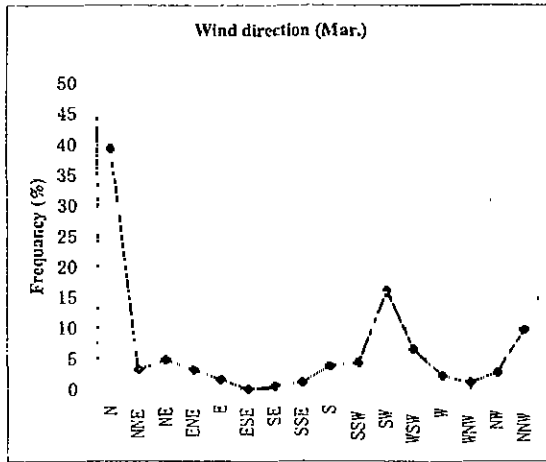


Table 7-4-10

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -April-

SUM, Apr	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0 * V * 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 * V * 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 * V * 3	4	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0
3 * V * 4	18	0	4	4	2	0	0	0	2	4	6	7	7	0	2	4
4 * V * 5	11	2	5	0	0	1	3	1	9	7	10	7	4	1	0	3
5 * V * 6	5	1	0	0	1	0	0	1	2	4	3	11	0	0	1	0
6 * V * 7	1	0	0	0	0	0	0	2	2	3	3	2	1	0	0	2
7 * V * 8	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0
8 * V * 9	0	0	0	0	0	0	0	0	2	0	0	1	0	0	0	0
9 * V * 10	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10 * V * 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 * V * 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 * V * 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 * V * 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	40	3	9	4	4	1	3	4	17	18	23	29	12	1	3	9
Wind speed	4	4	4	3	3	4	4	5	5	4	4	5	4	4	4	4
Ratio	22	2	5	2	2	1	2	2	9	10	13	16	7	1	2	5

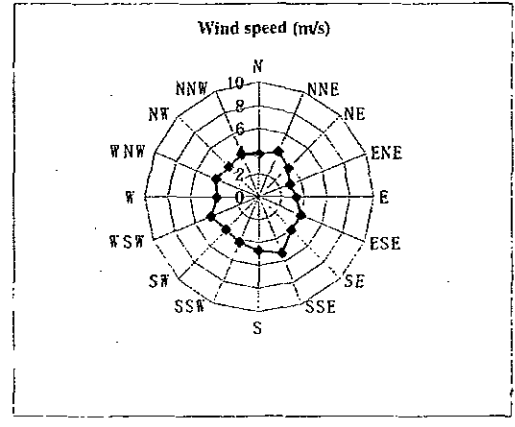
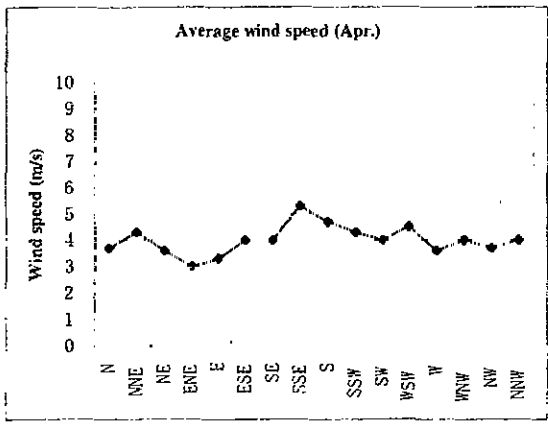
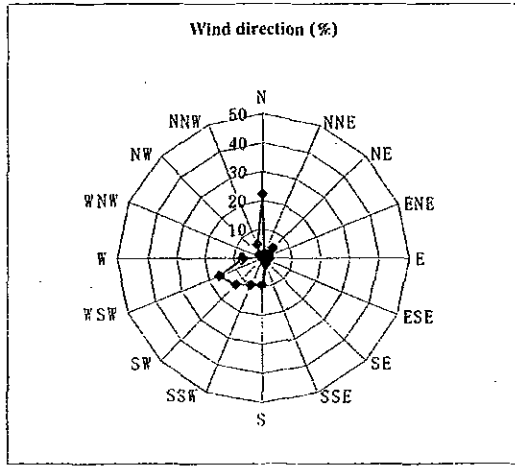
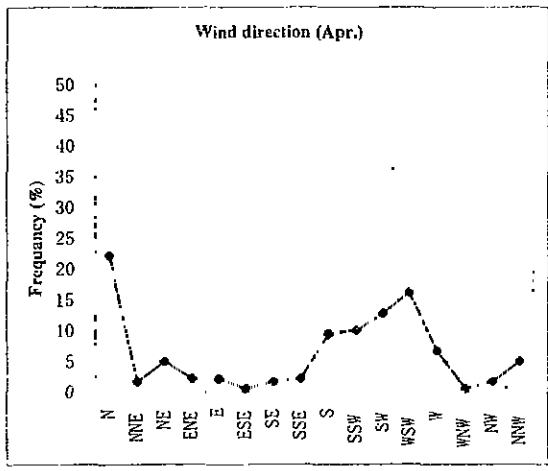


Table 7-4-11

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -May-

SUM,May	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0° V 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1° V 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2° V 3	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
3° V 4	8	2	1	0	1	0	0	0	0	0	5	5	4	1	1	0	0
4° V 5	5	2	1	0	0	0	1	1	8	4	14	16	3	0	1	5	0
5° V 6	0	0	0	0	0	0	0	0	9	7	8	17	4	1	0	0	0
6° V 7	0	0	0	0	0	0	1	2	1	7	8	4	0	0	0	0	0
7° V 8	0	0	0	0	0	0	0	1	1	2	7	1	0	0	0	0	0
8° V 9	0	0	0	0	0	0	0	1	4	3	4	1	0	0	0	0	0
9° V 10	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
10° V 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11° V 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12° V 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13° V 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	14	4	2	0	1	0	2	5	23	24	47	44	11	2	2	5	186
Wind speed	3	4	4	0	3	0	5	6	5	6	5	5	4	4	4	4	100
Ratio	8	2	1	0	1	0	1	3	12	13	25	24	6	1	1	3	

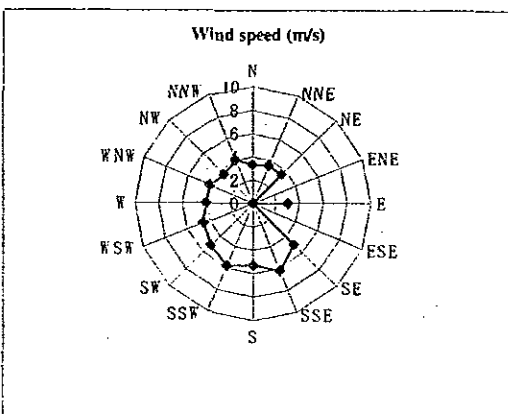
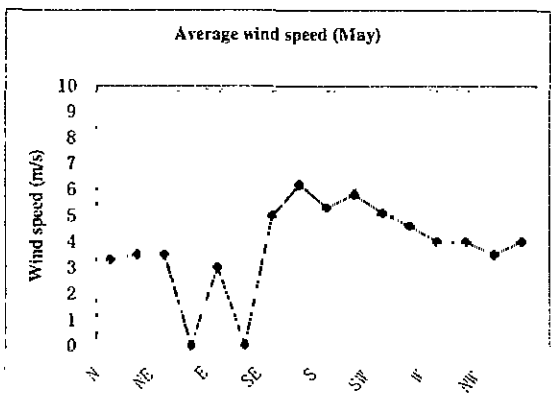
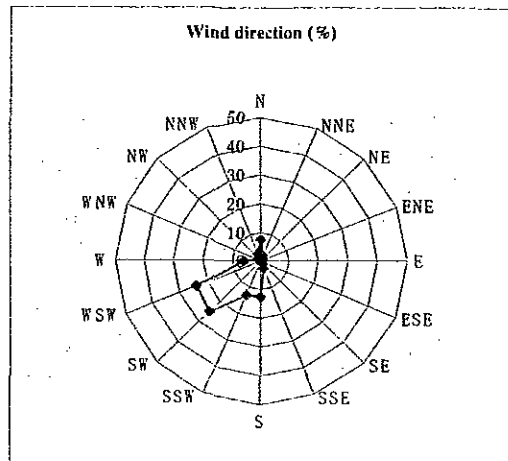
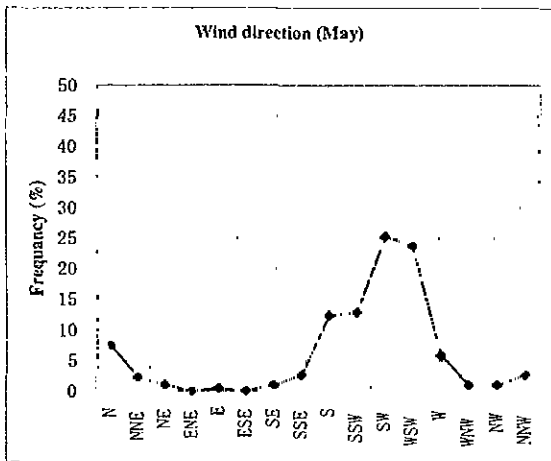


Table 7-4-12

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -June-

SUM,Jun	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0° V 1°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1° V 2°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2° V 3°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3° V 4°	8	1	1	0	0	0	0	0	0	1	1	2	1	0	0	1
4° V 5°	6	1	1	0	0	0	0	2	6	3	2	5	2	0	0	0
5° V 6°	0	0	0	0	0	0	0	2	4	14	8	10	0	2	0	0
6° V 7°	0	0	0	0	0	0	0	0	7	11	8	10	1	0	0	0
7° V 8°	0	0	0	0	0	0	0	0	1	3	5	2	0	0	0	0
8° V 9°	0	0	0	0	0	0	0	0	2	4	4	5	1	0	0	0
9° V 10°	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0
10° V 11°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11° V 12°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12° V 13°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13° V 14°	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	14	2	2	0	0	0	0	4	20	37	29	34	5	2	0	1
Wind speed	3	4	4	0	0	0	0	5	6	6	6	6	5	5	0	3
Ratio	9	1	1	0	0	0	0	3	13	25	19	23	3	1	0	1

150
100

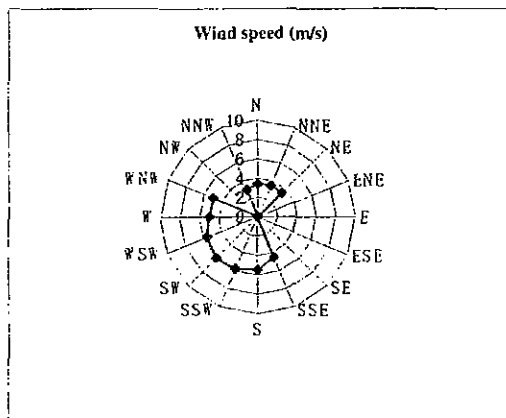
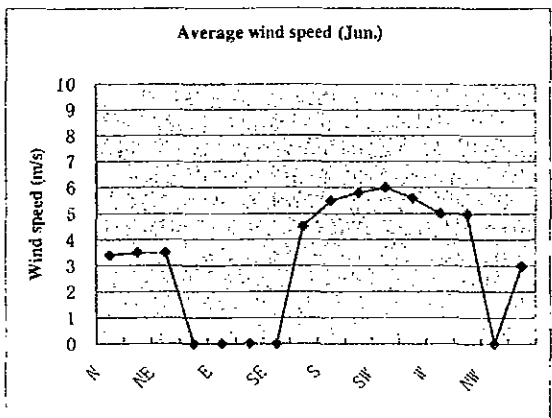
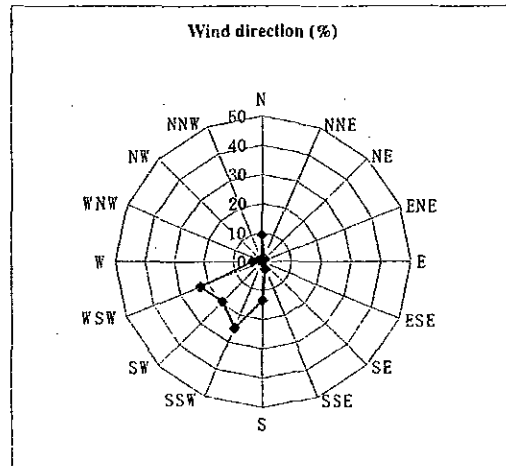
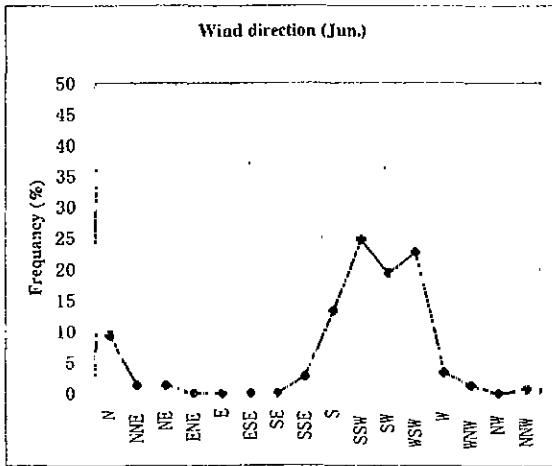


Table 7-4-13

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -July-

SUM, Jnl	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0° V 1'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1° V 2'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2° V 3'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3° V 4'	3	0	1	0	1	0	0	0	0	0	4	1	2	0	0	1
4° V 5'	0	4	1	0	0	0	0	1	4	0	17	7	5	1	0	2
5° V 6'	3	0	0	1	0	0	1	1	4	5	3	5	2	0	0	0
6° V 7'	0	0	1	0	0	0	1	2	10	12	11	8	2	0	0	1
7° V 8'	0	0	0	0	0	0	0	1	2	5	8	6	2	0	0	0
8° V 9'	0	0	0	0	0	0	0	1	4	7	8	3	1	0	0	0
9° V 10'	0	0	0	0	0	0	0	0	2	2	4	0	0	0	0	0
10° V 11'	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
11° V 12'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12° V 13'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13° V 14'	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Total	6	4	3	1	1	0	2	6	26	32	55	30	14	1	0	4
Wind speed	4	4	4	5	3	0	6	6	6	7	6	6	5	4	0	4
Ratio	3	2	2	1	1	0	1	3	14	17	30	16	8	1	0	2

185
100

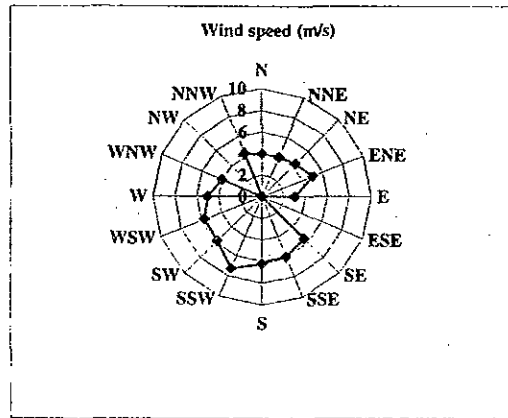
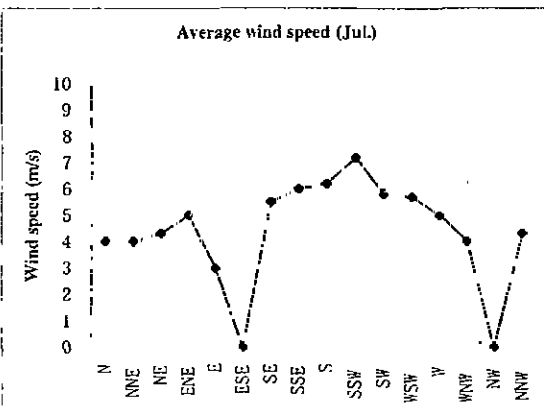
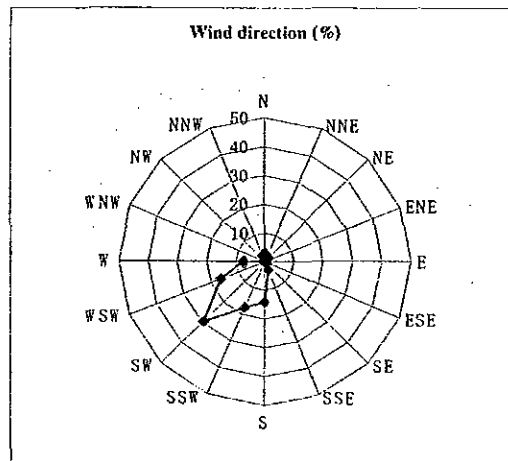
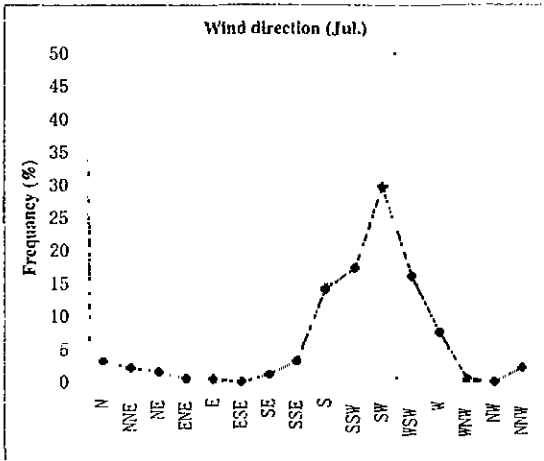


Table 7-4-14

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -August-

SUM, Aug	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NNW	
0 * V * 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 * V * 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 * V * 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 * V * 4	8	0	2	2	0	0	0	0	1	0	0	2	2	1	0	0
4 * V * 5	15	2	1	1	0	0	0	2	2	0	14	7	5	0	0	7
5 * V * 6	0	0	1	0	0	0	0	0	7	2	12	7	3	0	0	2
6 * V * 7	0	0	1	0	0	0	0	1	2	10	7	9	1	0	0	0
7 * V * 8	0	0	0	0	0	0	0	0	0	7	6	2	1	0	0	0
8 * V * 9	0	0	0	0	0	0	0	2	3	7	5	3	0	0	0	0
9 * V * 10	0	0	0	0	0	0	0	0	2	5	3	1	0	0	0	0
10 * V * 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 * V * 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 * V * 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 * V * 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	23	2	5	3	0	0	0	5	17	31	47	31	12	1	0	9
Wind speed	4	4	4	3	0	0	0	6	6	7	6	6	5	3	0	4
Ratio	12	1	3	2	0	0	0	3	9	17	25	17	7	1	0	5

186
100

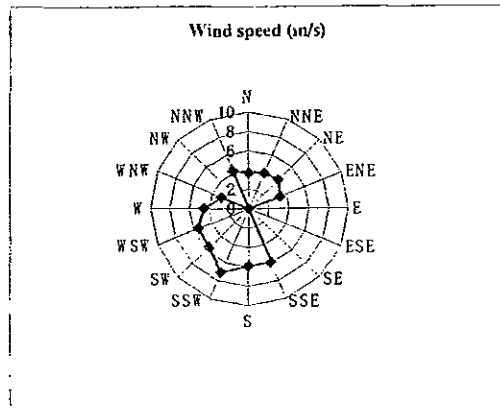
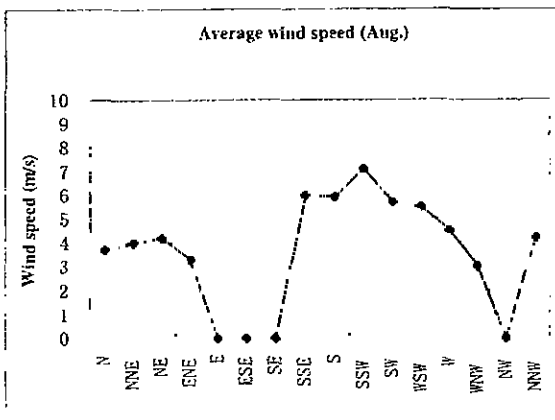
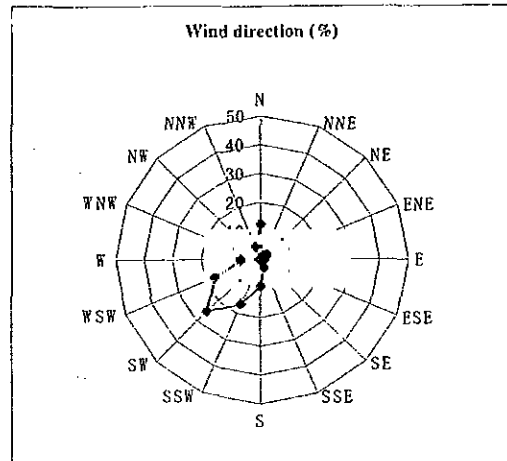
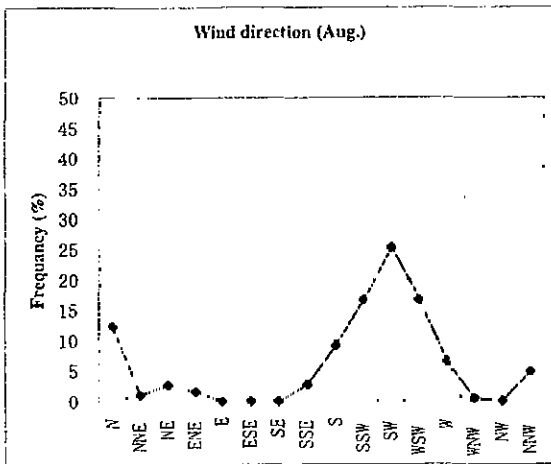


Table 7-4-15

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -September-

SUM, Sep	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338	
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	
0° V 1'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
1° V 2'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
2° V 3'	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	
3° V 4'	8	3	1	0	0	0	0	0	0	0	0	0	5	0	0	1	
4° V 5'	18	3	1	1	0	0	0	1	0	1	11	4	2	0	2	7	
5° V 6'	8	1	0	0	0	0	0	0	5	1	11	1	1	0	0	3	
6° V 7'	2	0	0	0	0	0	0	0	5	2	8	8	3	0	0	1	
7° V 8'	0	0	0	0	0	0	0	0	2	3	8	2	2	0	0	0	
8° V 9'	0	0	0	0	0	0	0	0	1	4	9	4	3	0	0	0	
9° V 10'	1	0	0	0	0	0	0	0	0	1	7	1	0	0	0	0	
10° V 11'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11° V 12'	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	
12° V 13'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13° V 14'	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	37	7	2	1	0	0	0	1	13	12	56	20	17	0	2	12	180
Wind speed	4	4	4	4	0	0	0	4	6	7	6	6	5	0	4	4	100
Ratio	21	4	1	1	0	0	0	1	7	7	31	11	9	0	1	7	

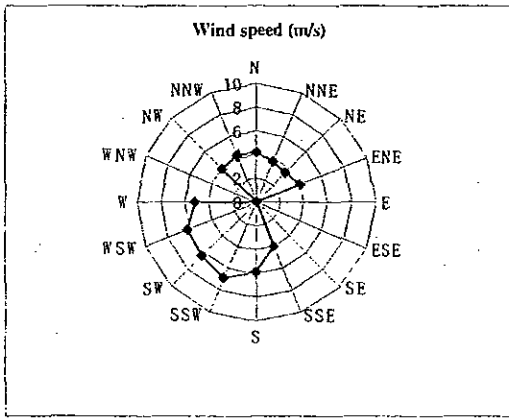
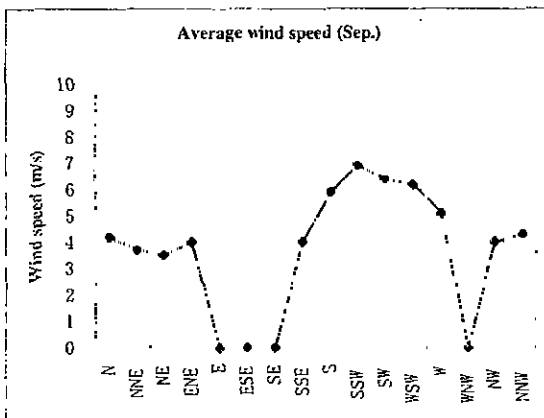
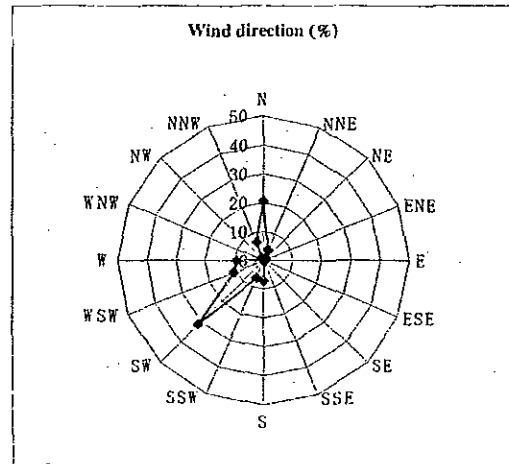
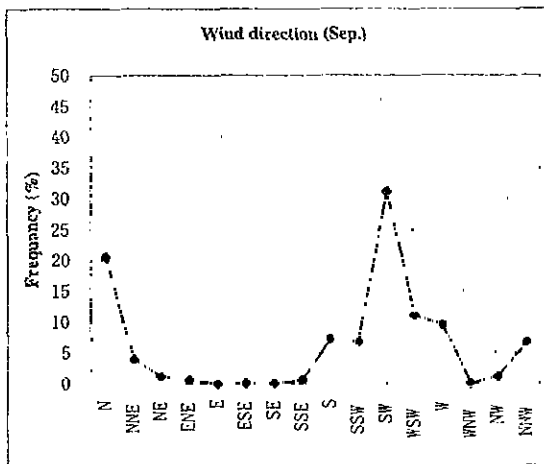


Table 7-4-16

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -October-

SUM,Oct	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0° V 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1° V 2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2° V 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3° V 4	16	3	1	0	0	0	0	0	0	0	0	2	1	1	0	0
4° V 5	23	3	1	0	0	0	0	1	0	0	8	6	1	0	0	3
5° V 6	5	0	0	0	0	0	0	1	5	4	7	9	8	0	0	1
6° V 7	0	0	0	0	1	0	0	0	0	1	13	6	1	0	1	0
7° V 8	1	0	0	0	0	0	0	0	2	2	3	5	1	0	0	0
8° V 9	0	0	0	0	0	0	0	0	4	4	14	6	1	0	0	0
9° V 10	0	0	0	0	0	0	0	0	0	3	5	2	0	0	0	0
10° V 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11° V 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12° V 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13° V 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	45	6	2	0	1	0	0	2	11	14	50	36	13	1	1	4
Wind speed	4	4	4	0	6	0	0	5	7	7	7	6	5	3	6	4
Ratio	24	3	1	0	1	0	0	1	6	8	27	19	7	1	1	2

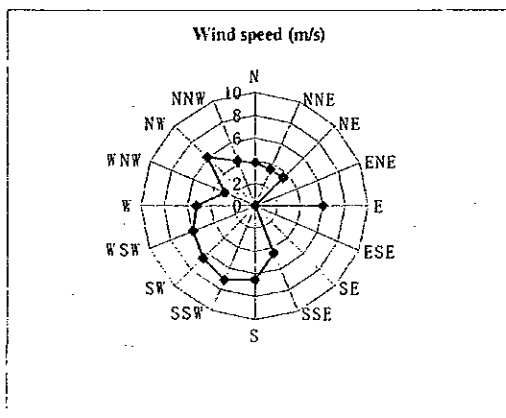
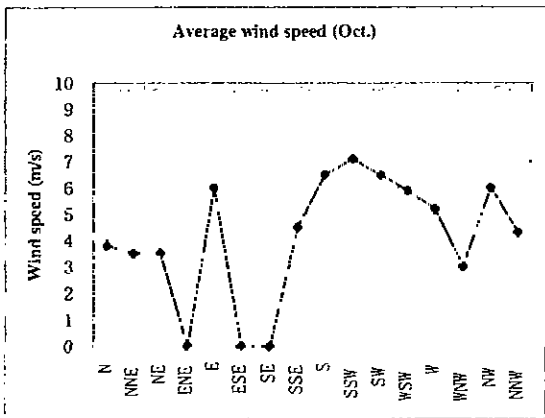
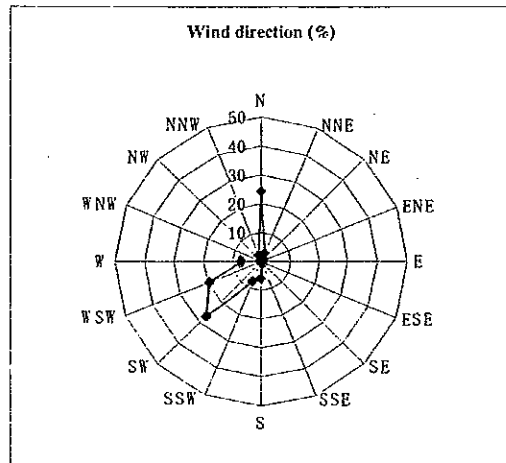
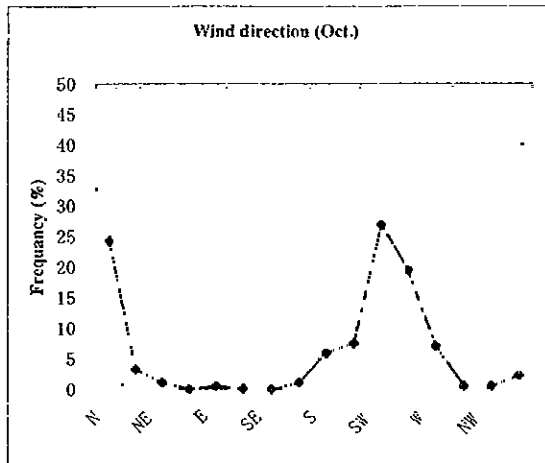


Table 7-4-17

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -November-

SUM,Nov	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0 * V * 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 * V * 2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2 * V * 3	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3 * V * 4	10	3	1	3	0	0	0	1	1	0	1	1	2	0	1	4
4 * V * 5	23	5	4	2	1	0	0	0	1	4	9	8	6	2	2	3
5 * V * 6	6	0	1	1	0	0	0	0	0	3	5	8	3	0	0	4
6 * V * 7	0	0	0	0	1	0	0	0	1	6	3	4	2	0	1	0
7 * V * 8	0	0	0	0	0	0	0	0	1	1	3	6	0	0	0	1
8 * V * 9	0	0	0	0	0	0	0	0	0	4	6	3	0	0	0	0
9 * V * 10	0	0	0	0	0	1	0	0	0	2	1	2	0	0	0	0
10 * V * 11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11 * V * 12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12 * V * 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 * V * 14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	40	8	6	6	2	1	0	1	4	20	28	32	14	2	4	12
Wind speed	4	4	4	4	5	9	0	3	5	6	6	6	4	4	4	4
Ratio	22	4	3	3	1	1	0	1	2	11	16	18	8	1	2	7

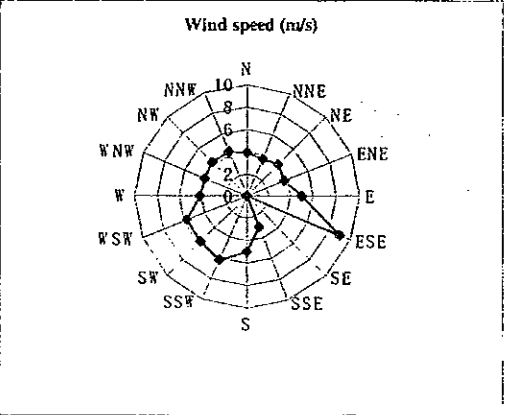
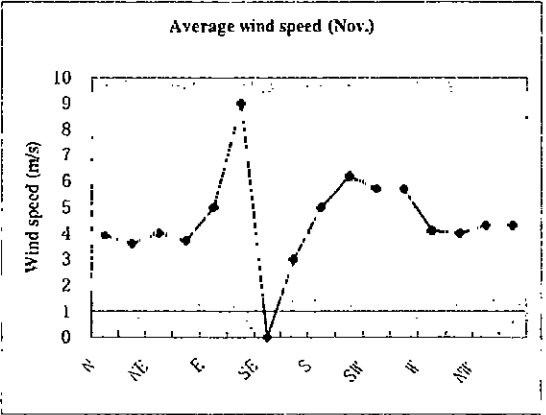
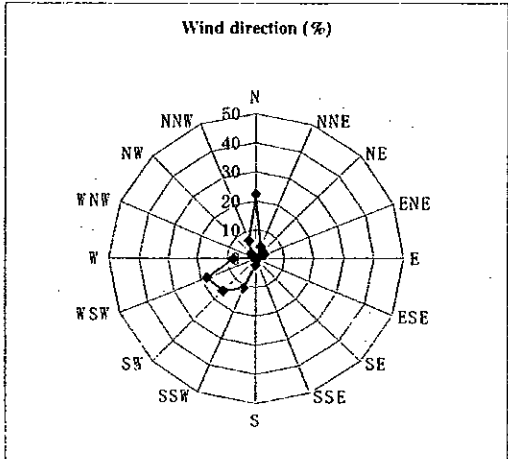
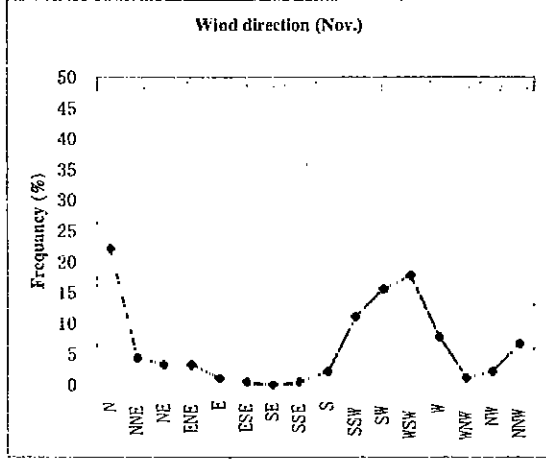
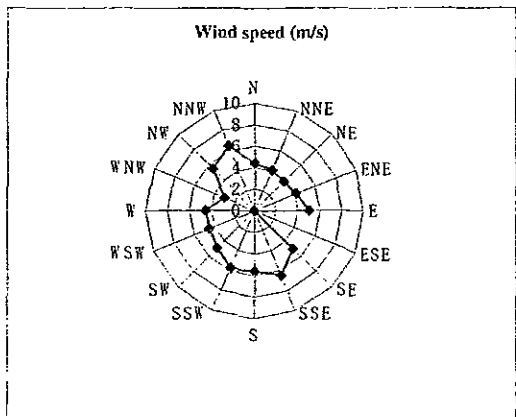
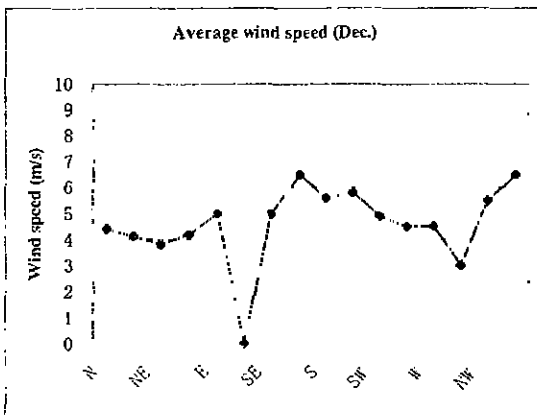
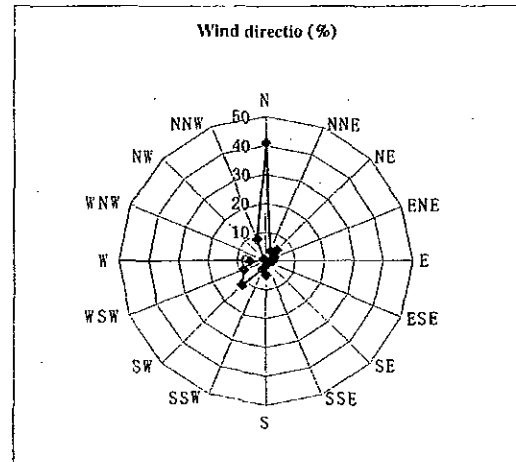
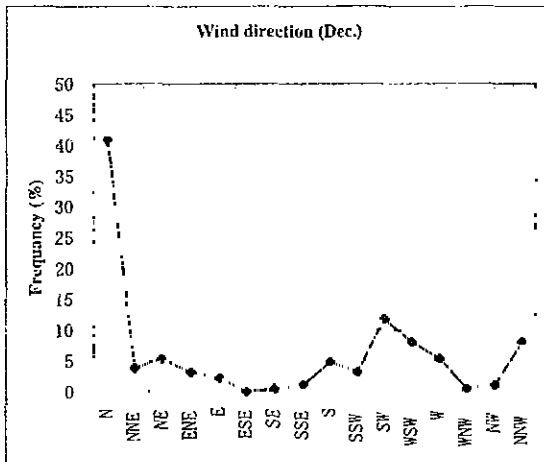


Table 7-4-18

MONTHLY WIND DATA at MAEMERE AIRPORT (1995-2000) -December-

SUM,Dec	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0°V·1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1°V·2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2°V·3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3°V·4	25	3	6	4	1	0	0	0	1	0	4	3	1	1	0	1
4°V·5	22	3	2	0	0	0	0	1	3	2	3	6	4	0	0	2
5°V·6	11	0	0	1	2	0	1	0	2	0	9	4	4	0	1	3
6°V·7	7	0	2	0	0	0	0	0	2	4	0	1	0	1	2	
7°V·8	1	0	0	0	1	0	0	0	1	2	1	0	0	0	2	
8°V·9	6	1	0	1	0	0	0	0	2	1	0	1	0	0	2	
9°V·10	2	0	0	0	0	0	0	1	1	0	0	0	0	0	1	
10°V·11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
11°V·12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12°V·13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13°V·14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	76	7	10	6	4	0	1	2	9	6	22	15	10	1	2	15
Wind speed	4	4	4	4	5	0	5	7	6	6	5	5	5	3	6	7
Ratio	41	4	5	3	2	0	1	1	5	3	12	8	5	1	1	8

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100



WIND DATA at MAEMERE AIRPORT (1995-2000)

* SUM	0	23	45	68	90	113	135	158	180	203	225	248	270	293	315	338
	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW
0 * V * F	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1 * V * 2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
2 * V * 3	10	1	1	0	1	0	0	0	0	0	2	0	1	0	0	0
3 * V * 4	180	31	31	22	8	1	2	3	7	9	37	27	33	8	7	24
4 * V * 5	192	38	26	12	1	2	4	11	37	28	103	79	34	5	9	44
5 * V * 6	56	8	5	6	4	0	2	5	46	46	79	78	27	3	2	29
6 * V * 7	31	1	4	0	2	0	2	7	29	57	75	52	12	0	4	12
7 * V * 8	9	0	2	0	1	0	0	2	9	26	44	26	6	1	1	8
8 * V * 9	26	3	2	1	0	0	0	4	22	37	50	27	6	1	4	11
9 * V * 10	12	0	0	0	0	1	0	1	5	15	21	6	0	0	1	4
10 * V * 11	0	1	0	0	0	0	0	0	0	1	0	0	1	0	0	3
11 * V * 12	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0
12 * V * 13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13 * V * 14	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0
Total	516	83	71	41	17	4	10	33	155	220	413	296	121	18	28	135
Wind speed	3	3	3	3	3	4	3	4	5	5	5	4	4	3	4	4
Ratio	24	4	3	2	1	0	1	2	7	10	19	14	6	1	1	6

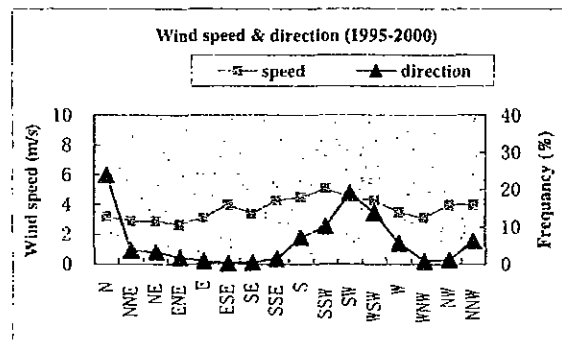
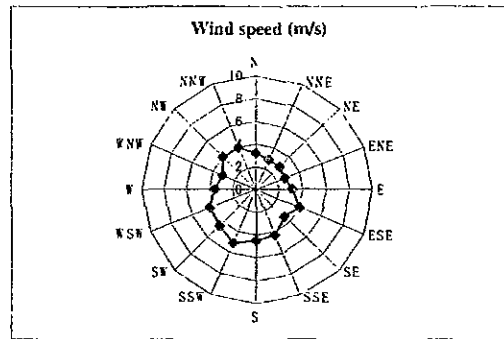
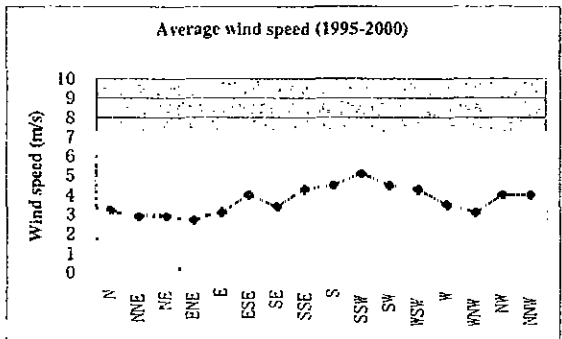
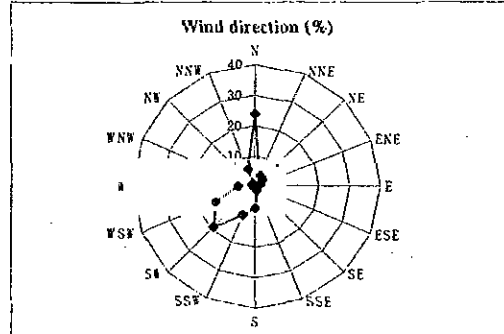
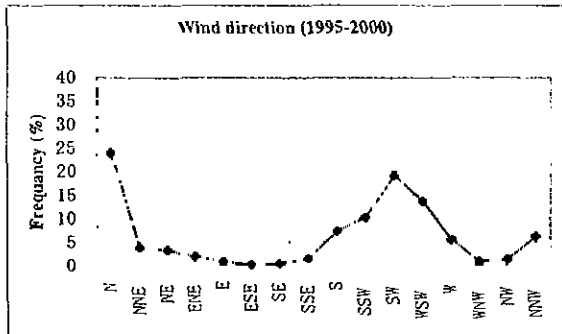


Table 7-4-19

APPENDIX -8

ECONOMIC AND FINANCIAL ANALYSIS

Economic Evaluation of Rompo/Waworada and Bima Fish Market

Unit: Rp.million

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvage Value	
Resource Management¹⁾																		
Benefit	0	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	420.45	0	
Cost	1512	349	285	240	239	280	257	258	257	254	537	75	75	75	75	75	-127.76	
IRR	8%	-1,512	71	136	180	181	140	163	162	163	167	-116	345	345	345	345	128	
Landing, Marketing, Processing etc²⁾																		
Benefit	0.00	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	3,097.98	0	
Cost	20,833.39	494.78	513.51	519.53	524.80	554.67	551.60	537.81	547.34	542.06	2,257.80	537.81	551.60	537.81	547.34	537.81	-9560.2345	
IRR	10% (20,833.39)	2,603.20	2,584.47	2,578.45	2,573.18	2,543.31	2,546.38	2,560.17	2,550.64	2,555.92	840.18	2,560.17	2,546.38	2,560.17	2,550.64	2,560.17	9,560	
Environmental Improvement³⁾																		
Benefit	0.00	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	15.08	0	
Cost	306.15	0.00	0.00	0.00	0.00	8.50	0.00	0.00	0.00	0.00	306.15	0.00	0.00	0.00	0.00	0.00	-148.824	
IRR	N.A.	-306.2	15.1	15.1	15.1	15.1	6.6	15.1	15.1	15.1	15.1	-291.1	15.1	15.1	15.1	15.1	149	
Total																		
Benefit	0	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	3,533.51	0	
Cost	22651.585	844.15	798.33	759.99	764.27	843.33	808.93	796.13	804.67	795.62	3,100.73	612.93	626.72	612.93	622.46	612.93	-9836.8141	
IRR	10%	-22,652	2,689.36	2,735.18	2,773.52	2,769.24	2,690.18	2,724.58	2,737.38	2,728.84	2,737.89	432.78	2,920.58	2,906.79	2,920.58	2,911.05	2,920.58	9,837

Notes: 1) Including costs/benefits of model fishing boat, surveillance activities by speed boat and other activities such as education/training, mobilization/operation of fisherman organization, etc.

2) Including costs/benefits of operation of fishery base such as Ice plant, FAD, transport truck, etc., as well as that of basic facilities.

3) Including costs/benefits of Improvement of community environment.

Financial Evaluation of Rompo/Waworada and Bima Market

Unit: Rp.million

			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvage Value
Complex																			
Revenue ¹⁾																			
	FAD	1		654	654	684	684	684	709	709	709	709	709	709	709	709	709	709	
Expenditure ²⁾				45	45	45	45	45	45	45	45	45	45	45	45	45	45	45	
O&M				426	426	438	438	438	462	462	462	462	462	462	462	462	462	462	
Investment			2,608	45	56	50	56	89	60	45	56	50	775	45	60	45	56	45	-787
IRR		4%	-2,608	229	218	241	236	202	231	247	236	242	-483	247	231	247	236	247	787
Grant ³⁾	0.8	42%	-522	229	218	241	236	202	231	247	236	242	-483	247	231	247	236	247	787
District																			
Revenue ⁴⁾				209	209	209	209	209	209	209	209	209	209	16	16	16	16	16	
Expenditure ⁵⁾																			
O&M	D			423	402	321	316	331	306	300	300	300	300	106	106	106	106	106	
Investment			30,819	0	0	0	0	44	0	0	0	0	3,154	0	0	0	0	0	-13,107
Private (borrower etc.) ⁶⁾																			
Expenditure																			
O&M				48	48	48	48	48	48	48	48	48	48	48	48	48	48	48	
Total		Revenue (A)		956	956	986	986	986	1,011	1,011	1,011	1,011	1,011	818	818	818	818	818	
		O&M (B)		897	876	807	801	817	816	811	811	811	811	617	617	617	617	617	
		Investment	33,427	45	56	50	56	133	60	45	56	50	3,928	45	60	45	56	45	-13,894
		A-B ⁷⁾		60	80	180	185	170	196	201	201	201	201	201	201	201	201	201	
FIRR		N.A.	-33,427	15	25	130	129	37	135	156	145	151	-3,728	156	141	156	145	156	13,894
Grant	0.8	3%	-6,685	15	25	130	129	37	135	156	145	151	-3,728	156	141	156	145	156	13,894
Routine Budget of ⁸⁾		C-D		-214	-193	-112	-106	-122	-96	-91	-91	-91	-91	-91	-91	-91	-91	-91	
Dinas Perikanan of	389	%		54.9	49.6	28.7	27.3	31.2	24.7	23.4	23.4	23.4	23.4	23.3	23.3	23.3	23.3	23.3	
District	199,521	%		0.11	0.10	0.06	0.05	0.06	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	

Notes: 1) Including incomes from operation of functional facilities and those fro transport truck, boat, etc. As for FAD, separately counting income that could absorb its renewal cost.

2) Including investment/renewal cost of functional facilities, FAD, transport truck, boat, etc., and separately counting those operation costs

3) In the case that could secure a grant fund of 80% of initial investment cost.

4) Counting only fish sale income by model boat operation and fishing license fee

5) Including cost of model boat operation, surveillance activities as well as other activities such as education/training, mobilization/operation of fishermen organizations, etc., and separately counting investment and O&M costs.

6) Counting fuel cost of transport truck (added to income /expenses of the total. In the economic evaluation, included to the operation costs of functional facilities)

7) The balance not including investment cost. In the calculation of IRR, indicating the case of overall investment cost

and that of securing a grant fund of 80% of initial investment costs

8) As for reference, indicating deficit amount and those rate(%) out of annual budget of fishery office and that of district government.

Economic Evaluation of Soro/Kempo and Hu'u

Unit: Rp.million

	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvage Value
Resource Management¹⁾																	
Benefit	0	318	318	318	318	318	318	318	318	318	318	318	318	318	318	318	0
Cost	1,596	509	445	267	265	299	285	287	285	278	763	98	98	98	98	98	-239
IRR	-4%	-1,596	-190	-126	52	53	20	33	31	33	41	-445	220	220	220	220	239
Landing, Marketing, Processing etc²⁾																	
Benefit	0	2,205	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	2,254	0
Cost	17,714	95	112	102	119	124	126	110	126	110	3,571	110	126	110	126	110	-8,573
IRR	9%	-17,714	2,110	2,142	2,152	2,135	2,130	2,127	2,144	2,127	2,144	-1,317	2,144	2,127	2,144	2,127	2,144
Total																	
Benefit	0	2,524	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	2,572	0
Cost	19,309	604	557	369	384	422	412	397	412	387	4,334	208	225	208	225	208	-8,813
IRR	8%	-19,309	1,920	2,015	2,203	2,188	2,150	2,161	2,176	2,161	2,185	-1,762	2,364	2,347	2,364	2,347	2,364

- Notes: 1) Including costs/benefits of model fishing boat, surveillance activities by speed boat and other activities such as education/training, mobilization/operation of fishermen organization, etc.
 2) Including costs/benefits from operation of fishery base such as Ice plant, FAD, transport truck, etc., as well as that of basic facilities.
 3) Including costs/benefits of Improvement of community environment.

Financial Evaluation of Soro/Kempo and Hu'u

Unit: Rp.millic

			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvage Value
Complex																			
Revenue ¹⁾				380	380	404	404	404	423	423	423	423	423	423	423	423	423	423	
Expenditure ²⁾																			
O&M				309	309	323	323	323	345	345	345	345	345	345	345	345	345	345	
Investment			1,762	0	19	0	19	24	19	0	19	0	181	0	19	0	19	0	-465
IRR		-3%	-1,762	71	53	81	62	57	60	79	60	79	-103	79	60	79	60	79	465
Grant ³⁾	80%	17%	-352	71	53	81	62	57	60	79	60	79	-103	79	60	79	60	79	465
District																			
Revenue ⁴⁾																			
	C			217	217	217	217	217	217	217	217	217	217	15	15	15	15	15	
Expenditure ⁵⁾																			
O&M	D			565	494	297	294	307	317	319	317	309	309	109	109	109	109	109	
Investment			23,561	0	0	0	0	33	0	0	0	0	5,228	0	0	0	0	0	-11,195
Private (borrower etc.) ⁶⁾																			
Expenditure																			
O&M				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	Revenue (A)			598	598	622	622	622	641	641	641	641	641	438	438	438	438	438	
	O&M (B)			874	803	620	618	631	662	664	662	653	653	454	454	454	454	454	
	Investment		25,323	0	19	0	19	57	19	0	19	0	5,409	0	19	0	19	0	-11,660
	A-B ⁷⁾			-277	-206	2	4	-9	-21	-23	-21	-13	-13	-16	-16	-16	-16	-16	
FIRR	N.A.		#####	-277	-224	2	-15	-66	-40	-23	-40	-13	-5,422	-16	-35	-16	-35	-16	11,660
Grant	80%	0%	-5,065	-277	-224	2	-15	-66	-40	-23	-40	-13	-5,422	-16	-35	-16	-35	-16	11,660
Routine Budget of ⁸⁾	C-D			-348	-277	-79	-77	-90	-100	-102	-100	-91	-91	-95	-95	-95	-95	-95	
Dinas Perikanan	724			48.1	38.3	11.0	10.7	12.4	13.8	14.1	13.8	12.6	12.6	13.1	13.1	13.1	13.1	13.1	
District	81,480			0.43	0.34	0.10	0.09	0.11	0.12	0.12	0.12	0.11	0.11	0.12	0.12	0.12	0.12	0.12	

Notes: 1) Including incomes from operation of functional facilities and those from transport truck, boat, etc. As for FAD, separately counting income that could absorb its renewal cost.

2) Including investment/renewal cost of functional facilities, FAD, transport truck, boat, etc., and separately counting those operation costs

3) In the case that could secure a grant fund of 80% of initial investment cost.

4) Counting only fish sale income by model boat operation and fishing license fee

5) Including cost of model boat operation, surveillance activities as well as other activities such as education/training, mobilization/operation

6) Counting fuel cost of transport truck (added to income /expenses of the total. In the economic evaluation, included to the operation costs of functional facilities)

7) The balance not including investment cost. In the calculation of IRR, indicating the case of overall investment cost

8) As for reference, indicating deficit amount and those rate(%) out of annual budget of fishery office and that of district government.

Economic Evaluation of Oka/Larantuka, Lamahala Jaya, Sagu, Lewoicba, Balauring and Lamalera

Unit: Rp.million

		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvaged Value
Resource Management¹⁾																		
	Benefit	0	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	1,603	0
	Cost	4,255	1,164	1,042	931	927	1,247	980	984	980	956	2,909	603	603	603	603	603	-825
	IRR	11%	-4,255	439	560	672	676	356	623	619	623	647	-1,306	1,000	1,000	1,000	1,000	825
Landing, Marketing, Processing etc²⁾																		
	Benefit	0	5,847	5,847	5,866	5,866	5,866	5,912	5,912	5,912	5,912	5,912	5,912	5,912	5,912	5,912	5,912	0
	Cost	23,701	1,001	999	1,021	1,043	1,913	1,138	1,103	1,131	1,110	5,039	1,103	1,138	1,103	1,131	1,103	-9,762
	IRR	18%	-23,701	4,845	4,848	4,845	4,823	3,953	4,774	4,809	4,781	4,802	872	4,809	4,774	4,809	4,781	9,762
Environmental Improvement³⁾																		
	Benefit	0	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	0
	Cost	47	1	0	0	0	35	0	0	0	0	47	0	0	0	0	0	-6
	IRR	82%	-47	40	41	41	41	5	41	41	41	41	-7	41	41	41	41	6
Total																		
	Benefit	0	7,490	7,490	7,510	7,510	7,510	7,555	7,555	7,555	7,555	7,555	7,555	7,555	7,555	7,555	7,555	0
	Cost	28,003	2,166	2,041	1,952	1,970	3,195	2,118	2,087	2,111	2,065	7,996	1,705	1,740	1,705	1,734	1,705	-10,592
	IRR	17%	-28,003	5,324	5,449	5,557	5,540	4,314	5,438	5,468	5,444	5,490	-440	5,850	5,815	5,850	5,822	10,592

Notes: 1) Including costs/benefits of model fishing boat, surveillance activities by speed boat and other activities such as education/training, mobilization/operation of fishermen organization, etc.

2) Including costs/benefits from operation of fishery base such as Ice plant, FAD, transport truck, etc., as well as that of basic facilities.

3) Including costs/benefits of improvement of community environment.

Financial Evaluation of Oka/Larantuka, Lamahala Jaya and Sagu (East Flores District Area)

Unit: Rp.million

			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvaged Value
Complex																			
Revenue ¹⁾																			
	FAD			1,021	1,021	1,054	1,054	1,054	1,095	1,095	1,095	1,095	1,095	1,095	1,095	1,095	1,095	1,095	1,095
Expenditure ²⁾																			
O&M				578	578	597	597	597	635	635	635	635	635	635	635	635	635	635	635
Investment			4,445	140	158	143	158	989	161	140	158	143	1,528	140	161	140	158	140	-990
IRR		2%	-4,445	443	425	454	439	-392	438	460	442	456	-928	460	438	460	442	460	990
Grant ³⁾	80%	41%	-889	443	425	454	439	-392	438	460	442	456	-928	460	438	460	442	460	990
District																			
Revenue ⁴⁾	C																		
				242	242	242	242	242	242	242	242	242	242	45	45	45	45	45	
Expenditure ⁵⁾																			
O&M	D			494	423	349	347	356	383	385	383	369	369	173	173	173	173	173	
Investment			16,263	0	0	0	0	174	0	0	0	0	2,574	0	0	0	0	0	-6,836
Private (borrower etc.) ⁶⁾																			
Expenditure																			
O&M				100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Total	Revenue (A)			1,503	1,503	1,536	1,536	1,536	1,576	1,576	1,576	1,576	1,576	1,380	1,380	1,380	1,380	1,380	
	O&M (B)			1,172	1,101	1,047	1,044	1,053	1,118	1,120	1,118	1,104	1,104	908	908	908	908	908	
	Investment		20,708	140	158	143	158	1,163	161	140	158	143	4,102	140	161	140	158	140	-7,826
	A-B ⁷⁾			331	402	490	492	483	458	456	458	472	472	471	471	471	471	471	
FIIR	N.A.		-20,708	191	244	346	334	-681	297	316	300	328	-3,630	331	310	331	314	331	7,826
Grant	80%	4%	-4,142	191	244	346	334	-681	297	316	300	328	-3,630	331	310	331	314	331	7,826
Routine Budget of ⁸⁾		C-D		-252	-181	-108	-105	-114	-141	-143	-141	-128	-128	-128	-128	-128	-128	-128	
Dinas Perikanan	578	%		43.6	31.3	18.6	18.2	19.8	24.4	24.8	24.4	22.1	22.1	22.2	22.2	22.2	22.2	22.2	
District	74,304	%		0.34	0.24	0.14	0.14	0.15	0.19	0.19	0.19	0.17	0.17	0.17	0.17	0.17	0.17	0.17	

- Notes:
- 1) Including incomes from operation of functional facilities and those from transport truck, boat, etc. As for FAD, separately counting income that could absorb its renewal cost.
 - 2) Including investment/renewal cost of functional facilities, FAD, transport truck, boat, etc., and separately counting those operation costs
 - 3) In the case that could secure a grant fund of 80% of initial investment cost.
 - 4) Counting only fish sale income by model boat operation and fishing license fee
 - 5) Including cost of model boat operation, surveillance activities as well as other activities such as education/training, mobilization/operation
 - 6) Counting fuel cost of transport truck (added to income/expenses of the total). In the economic evaluation, included to the operation costs of functional facilities
 - 7) The balance not including investment cost. In the calculation of IRR, indicating the case of overall investment cost
 - 8) As for reference, indicating deficit amount and those rate(%) out of annual budget of fishery office and that of district government.

Financial Evaluation of Lewoleba, Balauring and Lamalera (Lembata District)

Unit: Rp.million

			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvaged Value
Complex Revenue																			
				734	734	762	762	762	806	806	806	806	806	806	806	806	806	806	
	FAD			140	140	140	140	140	140	140	140	140	140	140	140	140	140	140	
Expenditure ²⁾																			
O&M				472	472	494	494	494	539	539	539	539	539	539	539	539	539	539	
Investment			4,251	140	153	144	153	161	157	140	153	144	629	140	157	140	153	140	-1,094
IRR		1%	-4,251	262	248	264	254	247	249	267	253	263	-222	267	249	267	253	267	1,094
Grant ³⁾	80%	29%	-850	262	248	264	254	247	249	267	253	263	-222	267	249	267	253	267	1,094
District Revenue ⁴⁾	C																		
				204	204	204	204	204	204	204	204	204	204	7	7	7	7	7	
Expenditure ³⁾																			
O&M	D			429	364	314	312	321	335	337	335	321	321	125	125	125	125	125	
Investment			9,771	0	0	0	0	233	0	0	0	0	1,590	0	0	0	0	0	-4,303
Private (borrower etc.) ⁵⁾																			
Expenditure																			
O&M				100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Total	Revenue (A)			1,177	1,177	1,206	1,206	1,206	1,250	1,250	1,250	1,250	1,250	1,053	1,053	1,053	1,053	1,053	
	O&M (B)			1,001	936	908	906	915	974	976	974	961	961	764	764	764	764	764	
	Investment		14,022	140	153	144	153	394	157	140	153	144	2,218	140	157	140	153	140	-5,397
	A-B ⁷⁾			177	242	298	300	291	276	273	276	289	289	289	289	289	289	289	
FIRR	N.A.		-14,022	37	88	154	147	-103	118	133	122	145	-1,929	149	131	149	135	149	5,397
Grant	80%	4%	-2,804	37	88	154	147	-103	118	133	122	145	-1,929	149	131	149	135	149	5,397
Routine Budget of ⁸⁾	C-D			-225	-160	-110	-108	-117	-131	-133	-131	-118	-118	-118	-118	-118	-118	-118	
Dinas Perikanan	578	%		39.0	27.7	19.1	18.7	20.2	22.7	23.1	22.7	20.3	20.4	20.4	20.4	20.4	20.4	20.4	
District	74,304	%		0.30	0.22	0.15	0.15	0.16	0.18	0.18	0.18	0.16	0.16	0.16	0.16	0.16	0.16	0.16	

Notes: 1) Including incomes from operation of functional facilities and those for transport truck, boat, etc. As for FAD, separately counting income that could absorb its renewal cost.

2) Including investment/renewal cost of functional facilities, FAD, transport truck, boat, etc., and separately counting those operation costs

3) In the case that could secure a grant fund of 80% of initial investment cost.

4) Counting only fish sale income by model boat operation and fishing license fee

5) Including cost of model boat operation, surveillance activities as well as other activities such as education/training, mobilization/operation

6) Counting fuel cost of transport truck (added to income/expenses of the total. In the economic evaluation, included to the operation costs of functional facilities)

7) The balance not including investment cost. In the calculation of IRR, indicating the case of overall investment cost

8) As for reference, indicating deficit amount and those rate(%) out of annual budget of fishery office and that of district government.

Economic Evaluation of Kalimati/Wuring (Maumere), Paga and Paupanda (Ende)

Unit: Rp.million

		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvaged Value	
Resource Management¹⁾																			
Benefit		0	2765.734	2765.734	2768.623	2768.623	2768.623	2774.383	2774.383	2774.383	2774.383	2774.383	2774.383	2774.383	2774.383	2774.383	2774.383	2774.383	0
Cost		4627.592	1603.4184	1419.3084	1405.9584	1396.5984	2145.5634	1404.2034	1397.3634	1396.4034	1392.6234	3169.7286	1030.611	1030.611	1030.611	1030.611	1030.611	1030.611	-523.8576
IRR	26%	-4.628	1.162	1.346	1.363	1.372	623	1.370	1.377	1.378	1.382	-395	1.744	1.744	1.744	1.744	1.744	1.744	524
Landing, Marketing, Processing etc²⁾																			
Benefit		0	6119.94	6119.94	6125.94	6125.94	6125.94	6134.94	6134.94	6134.94	6134.94	6134.94	6134.94	6134.94	6134.94	6134.94	6134.94	6134.94	0
Cost		29235.0505	973.892	1027.081	1056.364	1063.15	2580.964	1146.408	1117.248	1135.221	1128.435	5009.9665	1117.248	1146.408	1117.248	1135.221	1117.248	1117.248	-8777.37275
IRR	15%	-29.235	5.146	5.093	5.070	5.063	3.545	4.989	5.018	5.000	5.007	1.125	5.018	4.989	5.018	5.000	5.018	5.018	8,777
Environmental Improvement³⁾																			
Benefit		0	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	19.314	0
Cost		17.316	3.564	0	0	0	10.92	0	0	0	0	17.316	0	0	0	0	0	0	-3.198
IRR	99%	-17	16	19	19	19	8	19	19	19	19	2	19	19	19	19	19	19	3
Total																			
Benefit		0	8,905	8,905	8,914	8,914	8,914	8,929	8,929	8,929	8,929	8,929	8,929	8,929	8,929	8,929	8,929	8,929	0
Cost		33,880	2,581	2,446	2,462	2,460	4,737	2,551	2,515	2,532	2,521	8,197	2,148	2,177	2,148	2,166	2,148	2,148	-9,304
IRR	16%	-33,880	6,324	6,459	6,452	6,454	4,176	6,378	6,414	6,397	6,408	732	6,781	6,752	6,781	6,763	6,781	6,781	9,304

- Notes: 1) Including costs/benefits of motor fishing boat, surveillance activities by speed boat and other activities such as education/training, mobilization/operation of fishermen organization, etc.
 2) Including costs/benefits from operation of fishery base such as Ice plant, FAD, transport truck, etc., as well as that of basic facilities.
 3) Including costs/benefits of improvement of community environment.

Financial Evaluation of Kalimati/Wuring and Paga

Unit: Rp.million

			0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Salvaged Value
Complex Revenue																			
	FAD			699	699	731	731	731	762	762	762	762	762	762	762	762	762	762	762
Expenditure ²⁾																			
O&M				414	414	430	430	430	461	461	461	461	461	461	461	461	461	461	461
Investment			3,382	100	111	108	111	933	119	100	111	108	1,046	100	119	100	111	100	-634
IRR		0%	-3,382	284	274	293	291	-531	282	301	290	292	-645	301	282	301	290	301	634
Grant ³⁾	80%	29%	-676	284	274	293	291	-531	282	301	290	292	-645	301	282	301	290	301	634
District Revenue ⁴⁾	C			215	215	215	215	215	215	215	215	215	215	18	18	18	18	18	
Expenditure ⁵⁾																			
O&M	D			486	388	362	353	365	351	342	342	342	342	146	146	146	146	146	146
Investment			21,181	0	0	0	0	187	0	0	0	0	2,661	0	0	0	0	0	-8,413
Private (borrower etc.) ⁶⁾																			
Expenditure																			
O&M				100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total	Revenue (A)			1,113	1,113	1,146	1,146	1,146	1,177	1,177	1,177	1,177	1,177	980	980	980	980	980	
	O&M (B)			1,000	902	892	883	895	912	903	903	903	903	707	707	707	707	707	707
	Investment		24,563	100	111	108	111	1,120	119	100	111	108	3,706	100	119	100	111	100	-9,047
	A-B ⁷⁾			113	211	254	263	251	265	273	273	273	273	273	273	273	273	273	273
FIRR	N.A.		-24,563	13	100	146	153	-869	146	173	163	165	-3,433	173	154	173	162	173	9,047
Grant	80%	2%	-4,913	13	100	146	153	-869	146	173	163	165	-3,433	173	154	173	162	173	9,047
Routine Budget of ⁸⁾		C-D		-271	-173	-147	-138	-151	-136	-127	-127	-127	-127	-128	-128	-128	-128	-128	-128
Dinas Perikanan	392	%		69.3	44.3	37.6	35.2	38.4	34.8	32.6	32.6	32.6	32.6	32.7	32.7	32.7	32.7	32.7	32.7
istrict	32,815	%		0.83	0.53	0.45	0.42	0.46	0.41	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39	0.39

Notes: 1) Including incomes from operation of functional facilities and those for transport (truck, boat, etc.). As for FAD, separately counting income that could absorb its renewal cost.

2) Including investment/renewal cost of functional facilities, FAD, transport truck, boat, etc., and separately counting those operation costs

3) In the case that could secure a grant fund of 80% of initial investment cost.

4) Counting only fish sale income by model boat operation and fishing license fee

5) Including cost of model boat operation, surveillance activities as well as other activities such as education/training, mobilization/operation

6) Counting fuel cost of transport truck (added to income /expenses of the total. In the economic evaluation, included to the operation costs of functional facilities)

7) The balance not including investment cost. In the calculation of IRR, indicating the case of overall investment cost

8) As for reference, indicating deficit amount and those rate(%) out of annual budget of fishery office and that of district government.

Financial Evaluation of Paupanda (Ende District Area)

Unit: Rp. million

		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 (Salvaged Value)
Complex																	
Expenditure ²⁾																	
	FAD		763	763	791	791	791	822	822	822	822	822	822	822	822	822	822
			100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Expenditure																	
	O&M		397	397	420	420	420	467	467	467	467	467	467	467	467	467	467
	Investment		3,811	100	109	104	109	974	113	100	109	104	1,052	100	113	100	109
	IRR	1%	-3,811	367	358	367	362	-503	342	355	346	351	-597	355	342	355	346
	Grant ³⁾	80%	36%	-762	367	358	367	362	-503	342	355	346	351	-597	355	342	355
District																	
Reven	C																
			226	226	226	226	226	226	226	226	226	226	10	10	10	10	10
Expenditure ²⁾																	
	O&M/D		384	273	289	288	297	308	309	308	304	304	98	98	98	98	98
	Investment		13,480	0	0	0	0	634	0	0	0	0	2,026	0	0	0	0
Private (borrower etc.) ⁴⁾																	
Expenditure																	
	O&M		100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
Total	Revenue (A)		1,189	1,189	1,217	1,217	1,217	1,248	1,248	1,248	1,248	1,248	1,032	1,032	1,032	1,032	1,032
	O&M (B)		880	769	809	808	817	875	876	875	870	870	665	665	665	665	665
	Investment		17,291	100	109	104	109	1,608	113	100	109	104	3,078	100	113	100	109
	A-B ⁵⁾		309	420	408	409	400	373	372	373	378	378	368	368	368	368	368
	FIRR	N.A.	-17,291	209	310	304	300	-1,208	260	272	264	273	-2,700	268	254	268	258
	Grant	80%	-2%	-3,458	209	310	304	300	-1,208	260	272	264	273	-2,700	268	254	268
Routine Budget of ⁶⁾	C-D		-158	-47	-63	-62	-71	-82	-83	-82	-78	-78	-88	-88	-88	-88	-88
Dinas Perikanan	795	%	19.9	5.9	8.0	7.8	9.0	10.3	10.5	10.3	9.8	9.8	11.0	11.0	11.0	11.0	11.0
District	133,101	%	0.12	0.04	0.05	0.05	0.05	0.06	0.06	0.06	0.06	0.06	0.07	0.07	0.07	0.07	0.07

Notes: 1) Including incomes from operation of functional facilities and those from transport truck, boat, etc. As for FAD, separately counting income that could absorb its renewal cost.

2) Including investment/renewal cost of functional facilities, FAD, transport truck, boat, etc., and separately counting those operation costs

3) In the case that could secure a grant fund of 80% of initial investment cost.

4) Counting only fish sale income by model boat operation and fishing license fee

5) Including cost of model boat operation, surveillance activities as well as other activities such as education/training, mobilization/operation

6) Counting fuel cost of transport truck (added to income/expenses of the total. In the economic evaluation, included to the operation costs of functional facilities)

7) The balance not including investment cost. In the calculation of IRR, indicating the case of overall investment cost

8) As for reference, indicating deficit amount and those rate(%) out of annual budget of fishery office and that of district government.

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