

Madagascar MBES - January

Latitude: 14.97 S Longitude: 45.59 E

Weather Days

Wave Height > 5.0 ft Mean: 3.9 days Range: 0.9 - 6.9 days p50:5 days p75:2 days p90:1 days

Wave Height > 6.5 ft Mean: 2.2 days Range: 0.0 - 4.7 days p50:7 days p75:2.5 days p90:2 days

Wave Height > 8.0 ft Mean: 1.1 days Range: 0.0 - 3.0 days p50:30 days p75:1 days p90:0.5 days

Wind Speed > 15.0 knots Mean: 3.9 days Range: 1.3 - 6.4 days p50:4 days p75:1.5 days p90:1 days

Wind Speed > 20.0 knots Mean: 1.3 days Range: 0.0 - 3.1 days p50:1 days p75:0.5 days p90:0.5 days

Wind Speed > 25.0 knots Mean: 0.4 days Range: 0.0 - 1.3 days p50:0.5 days p75:0.5 days p90:0.5 days

Working Window

Wave Height < 5.0 ft
A 1 day or longer window will statistically occur 2.0 times per month
A 2 day or longer window will statistically occur 1.9 times per month
A 3 day or longer window will statistically occur 1.8 times per month

Wave Height < 6.5 ft
A 1 day or longer window will statistically occur 1.7 times per month
A 2 day or longer window will statistically occur 1.5 times per month
A 3 day or longer window will statistically occur 1.5 times per month

Wave Height < 8.0 ft
A 1 day or longer window will statistically occur 1.5 times per month
A 2 day or longer window will statistically occur 1.4 times per month
A 3 day or longer window will statistically occur 1.3 times per month

Waves

Mean Height: 2 - 4 ft

The wave heights will occasionally reach 12 - 14 ft, but rarely higher.

Mean Period: 6 - 8 sec

The wave periods will occasionally reach 8 - 10 sec, but rarely longer.

Principle Direction, from: NNE

WindSea/Swell: 14% / 86%

Winds

Mean Speed: 5 - 10 kts

The winds will occasionally reach 25 - 30 kts, but rarely greater.

Principle Direction, from: NW

Currents

Mean Speed: 0.50-0.75 kts

The currents will occasionally reach 1.75-2.00 kts, but rarely greater.

Principle Direction, to: NE

Weather Days

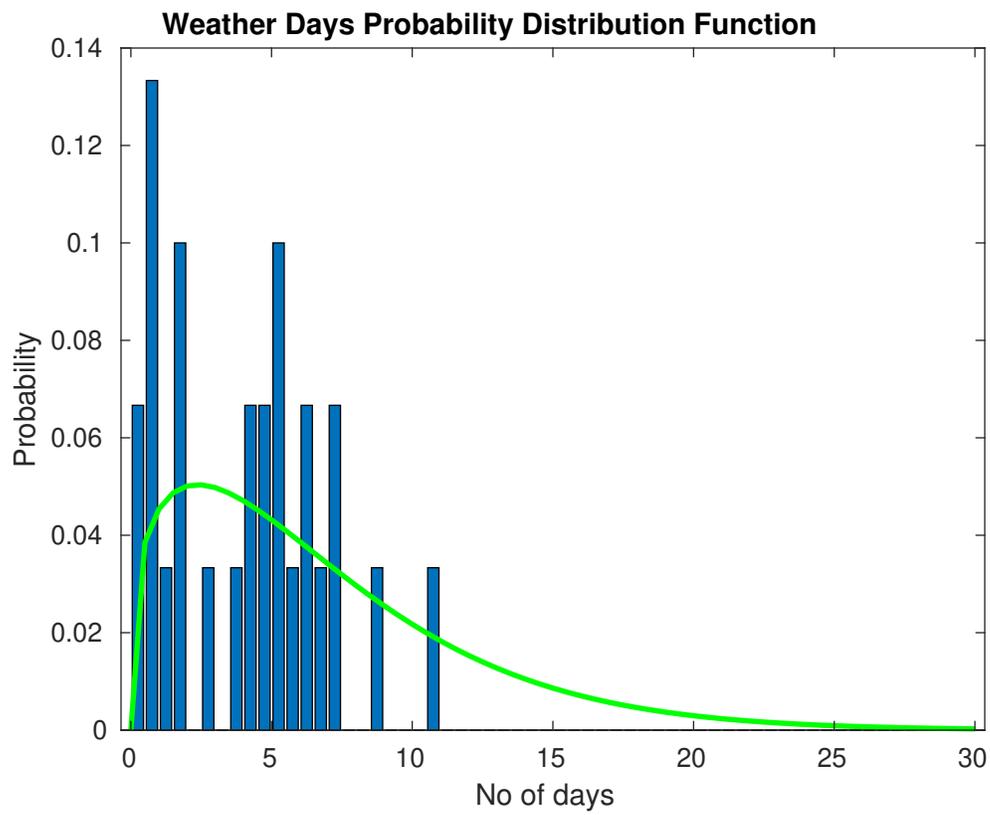
Current Speed > 0.5 knots Mean: 19.1 days Range: 13.8 - 24.5 days p50:21 days p75:15 days p90:12 days

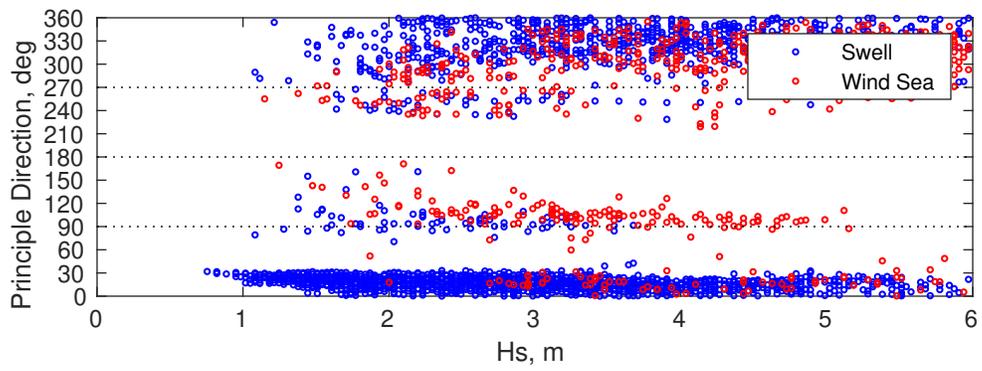
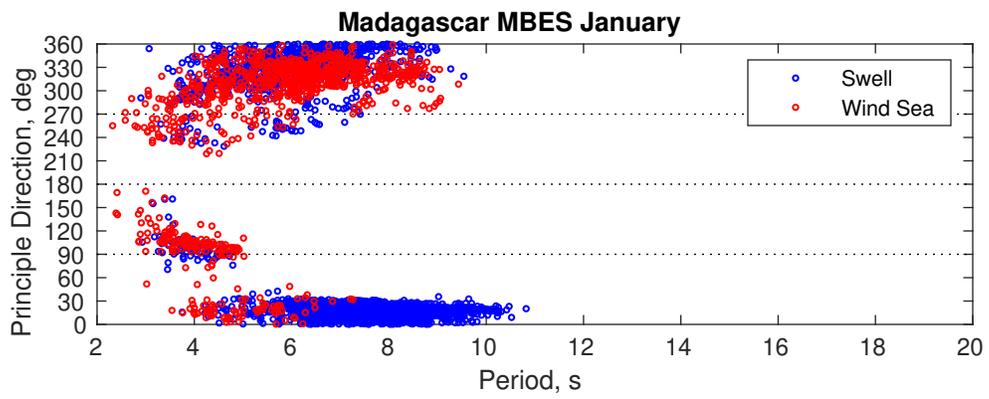
Current Speed > 1.0 knots Mean: 7.1 days Range: 1.4 - 12.7 days p50:8 days p75:3 days p90:1 days

Current Speed > 1.5 knots Mean: 1.2 days Range: 0.0 - 3.1 days p50:1 days p75:1 days p90:1 days

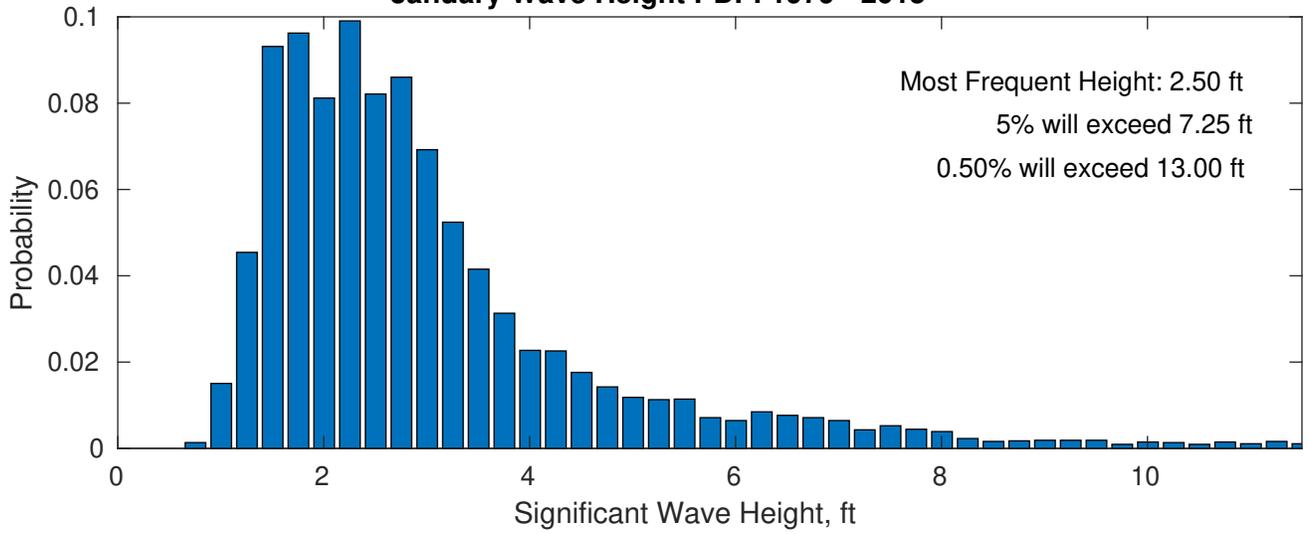
Severe Storms

Severe storms with gale force winds and extreme waves are not expected during this month.

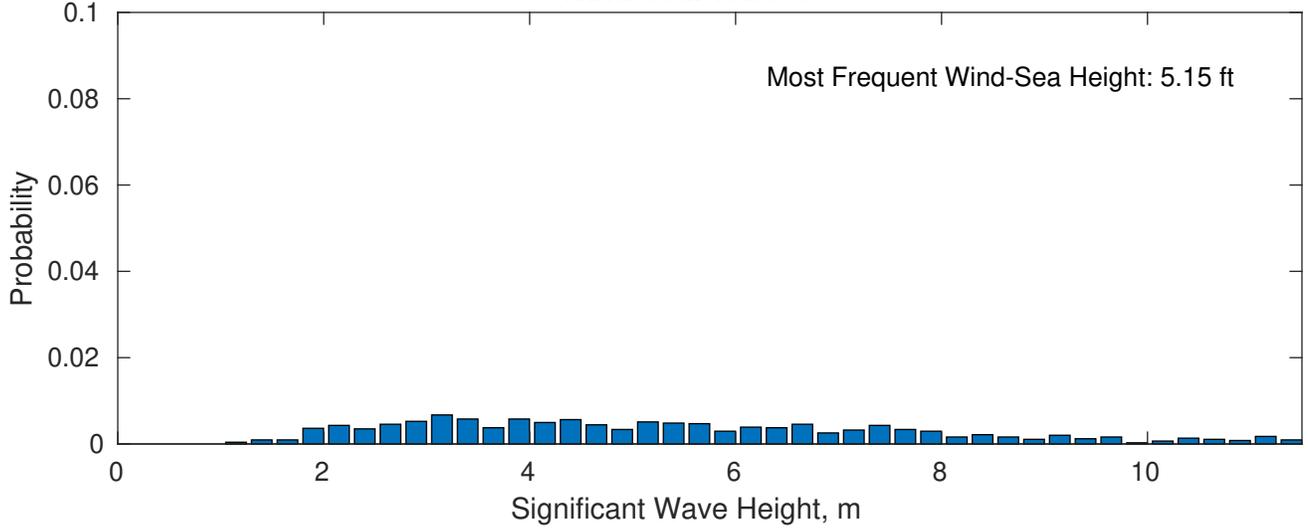




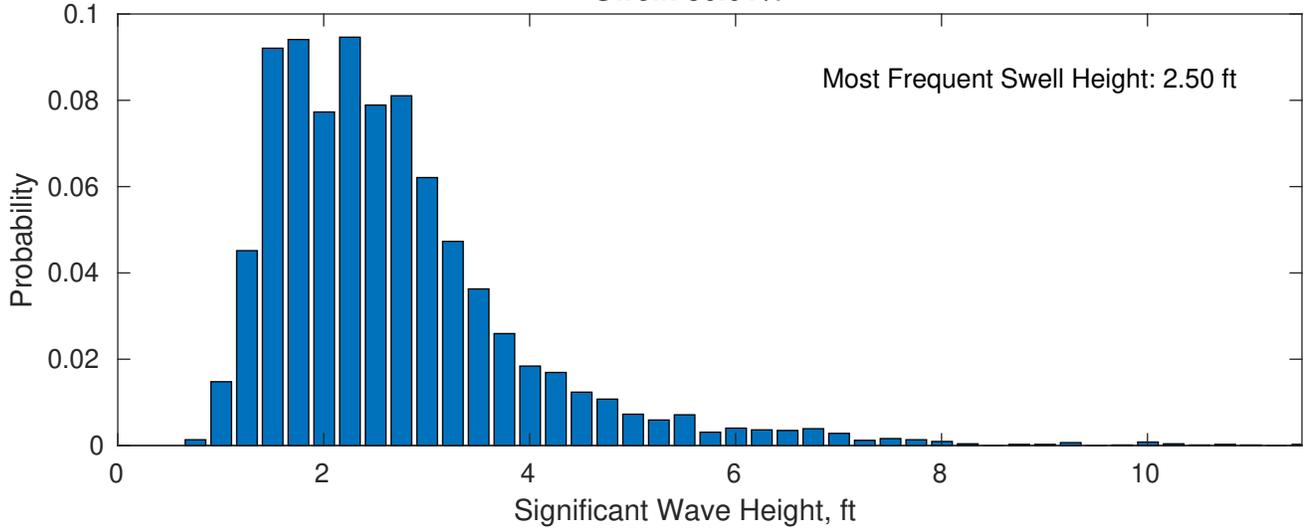
January Wave Height PDF: 1979 - 2015



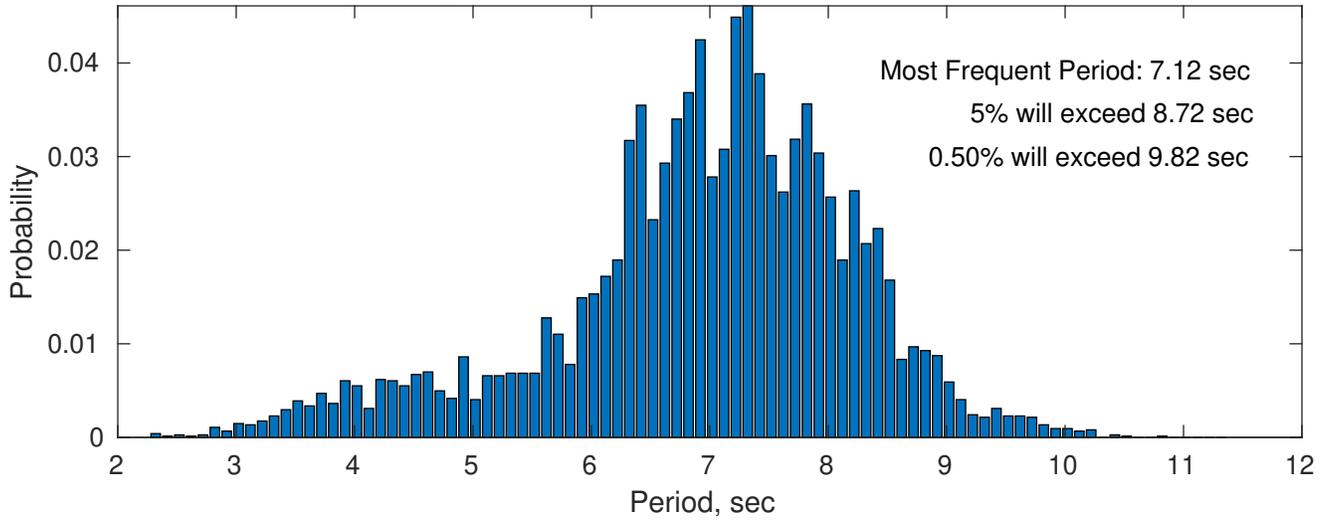
Wind-Sea: 13.99%



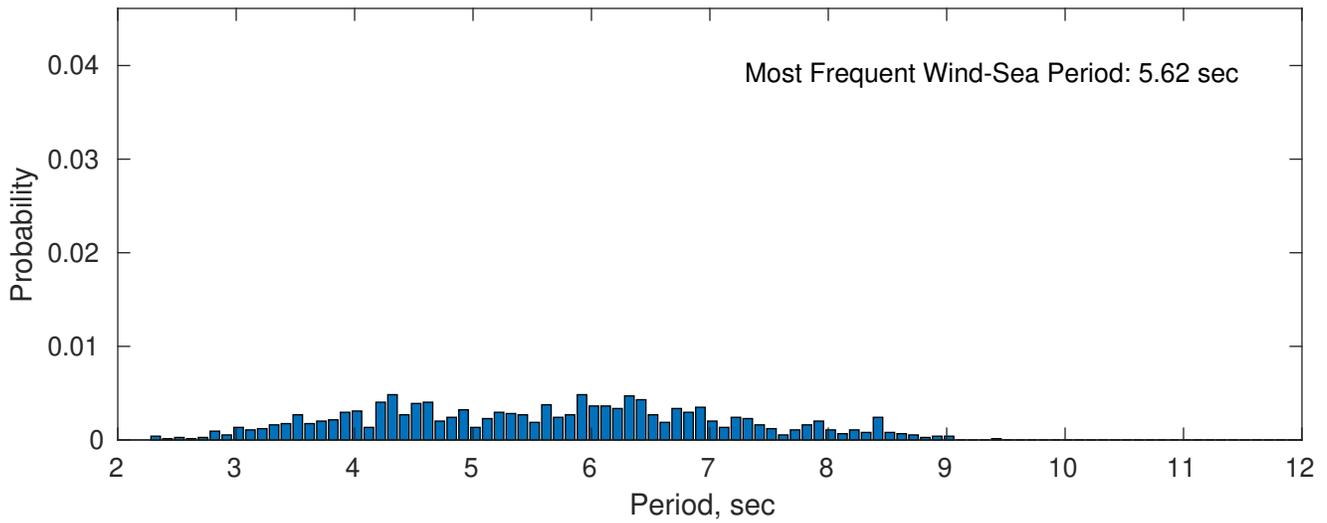
Swell: 86.01%



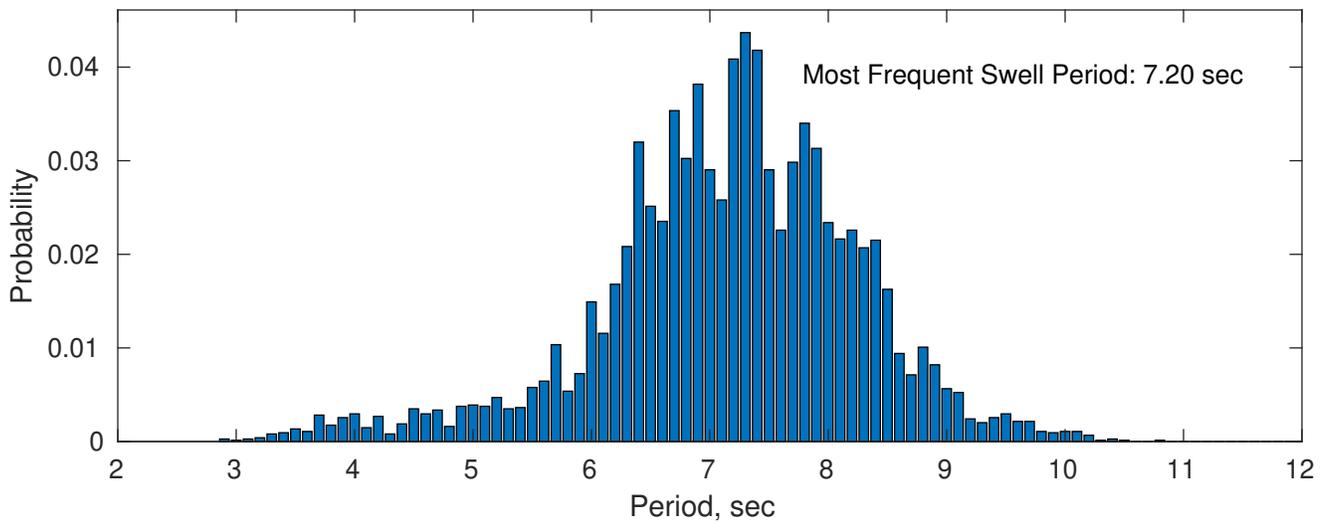
January Peak Wave Period PDF: 1979 - 2015



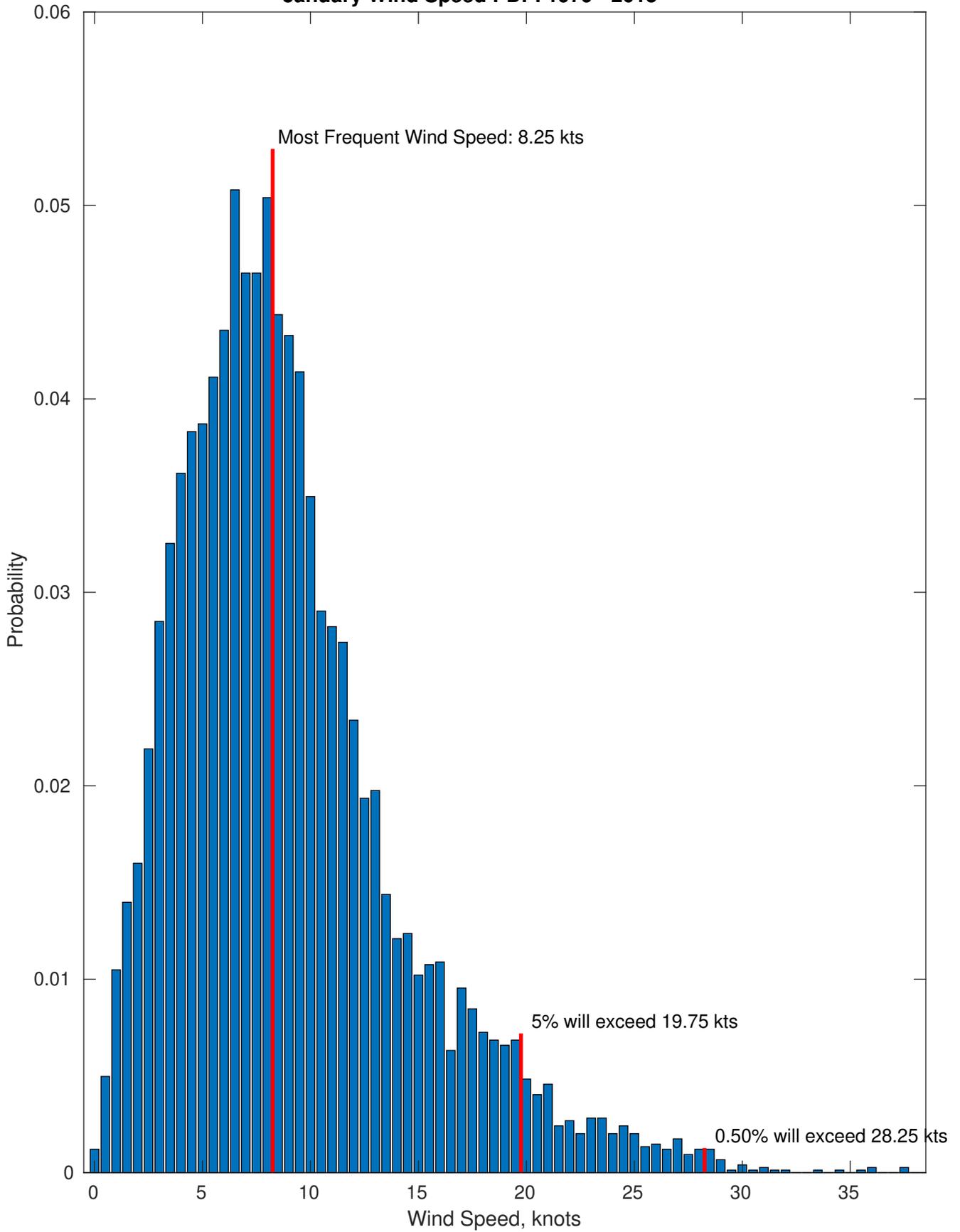
Wind-Sea: 13.99%



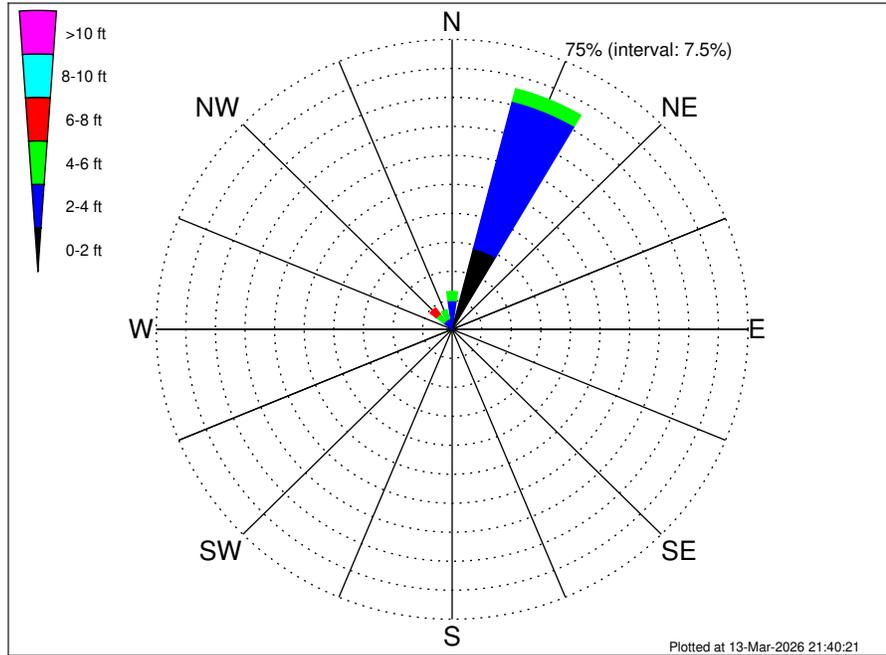
Swell: 86.01%



January Wind Speed PDF: 1979 - 2015



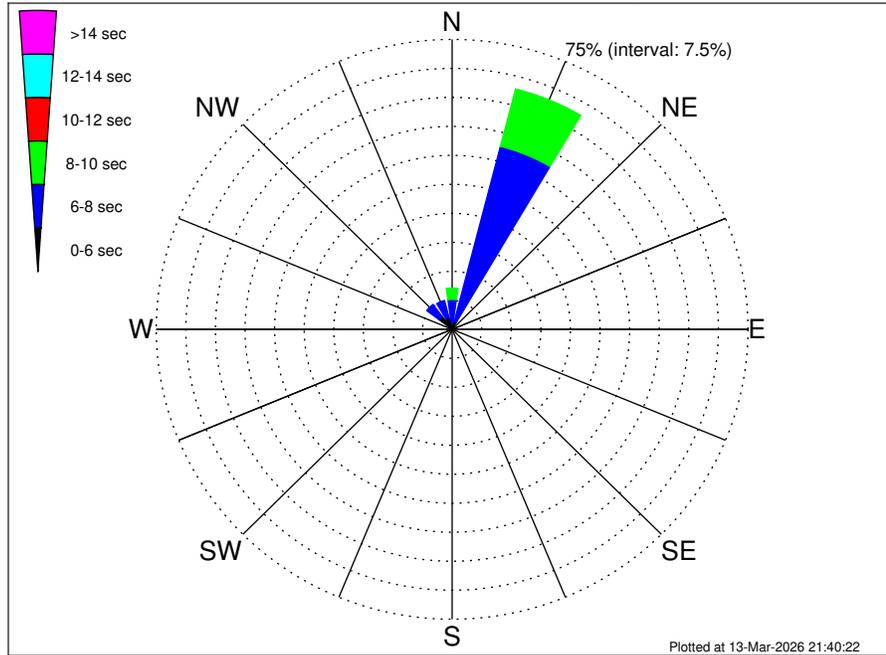
Madagascar MBES Climatological WaveHeight Rose for January: 1979 - 2015



Joint Frequency Distribution Table

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
calm	•	0.13	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.13
1 - 2 ft	0.97	21.51	0.01	•	0.17	0.13	0.09	0.05	0.01	•	•	0.19	0.11	0.24	0.15	0.15	23.79
2 - 4 ft	6.49	39.34	0.04	0.08	0.75	0.91	0.08	0.03	0.01	•	0.16	0.55	0.42	1.14	2.53	2.63	55.17
4 - 6 ft	2.34	3.31	0.05	0.01	0.28	0.11	•	•	•	•	0.05	0.17	0.28	0.77	2.33	2.46	12.16
6 - 8 ft	0.78	0.22	0.04	•	•	•	•	•	•	•	•	•	0.09	0.36	1.96	1.59	5.04
8 - 10 ft	0.11	0.05	•	•	•	•	•	•	•	•	•	•	0.05	0.11	0.73	0.56	1.61
10 - 12 ft	•	•	•	•	•	•	•	•	•	•	•	•	•	0.04	0.56	0.46	1.06
12 - 14 ft	•	•	•	•	•	•	•	•	•	•	•	•	0.04	0.08	0.34	0.31	0.77
14 - 16 ft	0.01	•	•	•	•	•	•	•	•	•	•	•	0.03	0.05	0.09	0.03	0.22
16 - 18 ft	•	•	•	•	•	•	•	•	•	•	•	•	•	0.01	0.03	•	0.04
> 18 ft	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Total	10.70	64.56	0.15	0.09	1.21	1.16	0.17	0.08	0.03	•	0.22	0.91	1.02	2.81	8.71	8.19	100.00

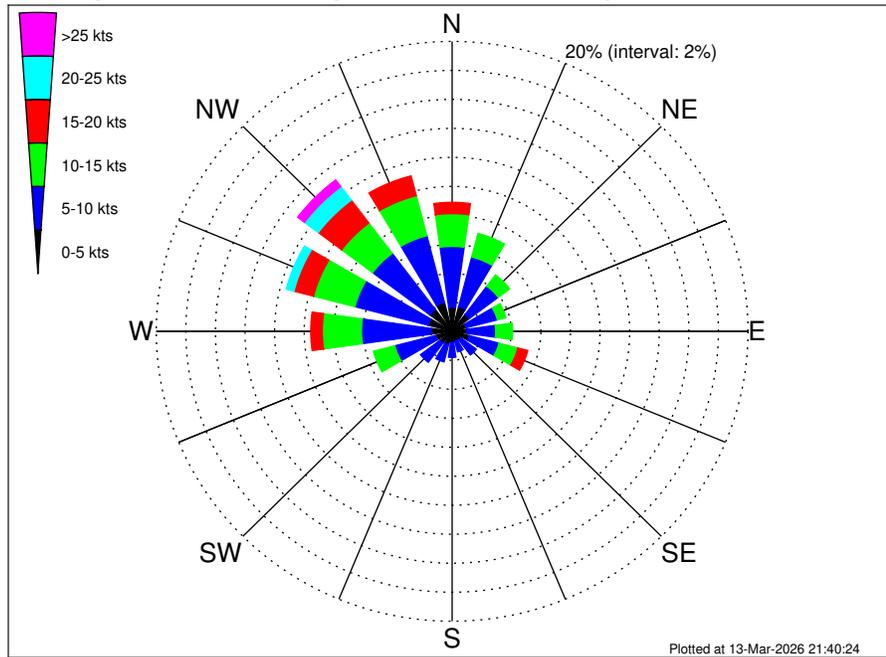
Madagascar MBES Climatological WavePeriod Rose for January: 1979 - 2015



Joint Frequency Distribution Table

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
calm	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
1 - 2 sec	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
2 - 4 sec	0.01	0.12	0.01	0.03	0.40	0.78	0.15	0.08	0.03	•	0.08	0.43	0.31	0.60	0.22	0.08	3.33
4 - 6 sec	1.20	2.10	0.09	0.07	0.81	0.38	0.03	•	•	•	0.13	0.40	0.36	1.40	4.01	3.05	14.02
6 - 8 sec	6.53	46.69	0.03	•	•	•	•	•	•	•	•	0.08	0.30	0.73	3.83	4.57	62.76
8 - 10 sec	2.93	15.32	0.01	•	•	•	•	•	•	•	•	•	0.05	0.08	0.66	0.48	19.54
10 - 12 sec	0.03	0.32	•	•	•	•	•	•	•	•	•	•	•	•	•	•	0.35
12 - 14 sec	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
14 - 16 sec	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
18 - 20 sec	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
22 - 24 sec	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Total	10.70	64.56	0.15	0.09	1.21	1.16	0.17	0.08	0.03	•	0.22	0.91	1.02	2.81	8.71	8.19	100.00

Madagascar MBES Climatological Wind Rose for January: 1979 - 2015



Joint Frequency Distribution Table

	N	NNE	NE	ENE	E	ESE	SE	SSE	S	SSW	SW	WSW	W	WNW	NW	NNW	Total
calm	0.04	0.03	0.03	0.04	0.01	0.03	0.01	0.09	0.03	0.04	0.04	0.04	0.07	0.05	0.01	0.05	0.62
0 - 5 kts	1.63	1.73	1.41	0.94	0.99	1.17	0.74	0.60	0.75	0.90	0.98	1.12	1.34	1.60	1.87	2.00	19.78
5 - 10 kts	4.19	3.53	2.46	2.18	1.94	2.08	1.29	0.77	1.02	1.24	1.65	2.85	4.72	5.13	4.85	4.76	44.66
10 - 15 kts	2.26	1.68	0.97	0.59	1.14	1.32	0.50	0.23	0.24	0.22	0.46	1.49	2.65	2.89	2.62	2.85	22.10
15 - 20 kts	0.78	0.47	0.19	0.05	0.20	0.69	0.11	•	•	0.07	0.08	0.20	0.78	1.37	1.98	1.41	8.37
20 - 25 kts	0.39	0.01	0.05	0.04	•	0.11	0.01	•	•	0.01	•	0.01	0.26	0.54	1.17	0.46	3.06
25 - 30 kts	0.07	•	0.03	•	•	•	•	•	•	•	•	•	0.01	0.20	0.52	0.36	1.20
30 - 35 kts	•	•	•	•	•	•	•	•	•	•	•	•	0.01	0.03	0.04	0.05	0.13
35 - 40 kts	•	•	•	•	•	•	•	•	•	•	•	•	•	0.03	0.01	0.03	0.07
40 - 45 kts	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
45 - 50 kts	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Total	9.35	7.46	5.13	3.84	4.29	5.39	2.66	1.69	2.04	2.47	3.21	5.71	9.84	11.84	13.08	11.98	100.00