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Introduction:

As requested, here is a climatology study for the Aegean Sea/Turkey region during the summer months. Included below are average conditions for the best 4 week period for Mykonos and Marmaris vicinities.

Synopsis:

The weather across this area is dominated primarily by a thermal trough of low pressure. Typically, the axis of this trough is oriented east to west and extends along or near the South Coast of Turkey, then westward across the Aegean Sea to and through the Peloponnesus, to the Ionian Sea. This is a semi-permanent weather feature during the late spring and summer months with little overall motion and strength to be expected. However, slight southward fluctuations in the placement of this trough can be expected, especially when areas of high pressure move from Balkans toward the Black Sea and Far E'rn Europe.

Etesian Wind Events:

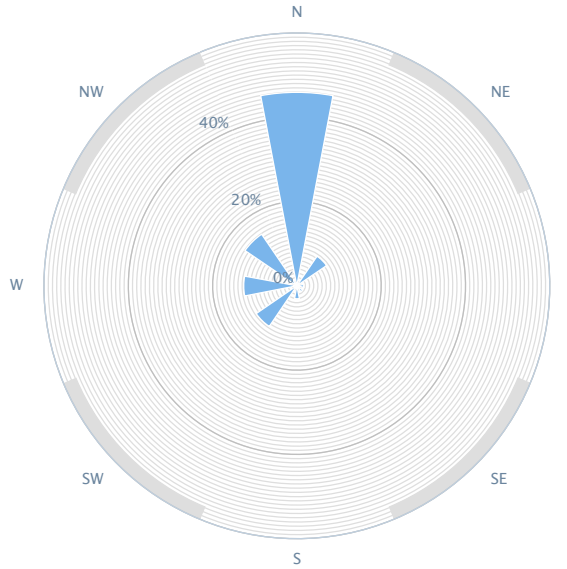
The above mentioned thermal trough is responsible for the "Etesian" N'ly winds (or known as "Meltemi" in Turkey) that occur across these waters during the summer months. When interaction between the thermal trough and an area of high pressure moving across the Balkans occurs, this is when the Etesian can be expected. These winds are especially high over the Aegean Sea and between islands within the Cyclades, where near gale to gale force N'ly winds are not uncommon. An Etesian can occur for as much as 3-5 days at a time, and in extreme cases, last for 1-2 weeks. Please note on page 2 the average conditions for the Mykonos vicinity, as a reference.

Winds will normally tend light close to the trough axis, with more W-NW-N winds common south of the trough axis. Waters along the Turkish Riviera will usually be under the influence of the thermal trough axis. Please note on page 3 the average conditions for the Marmaris vicinity, as a reference.





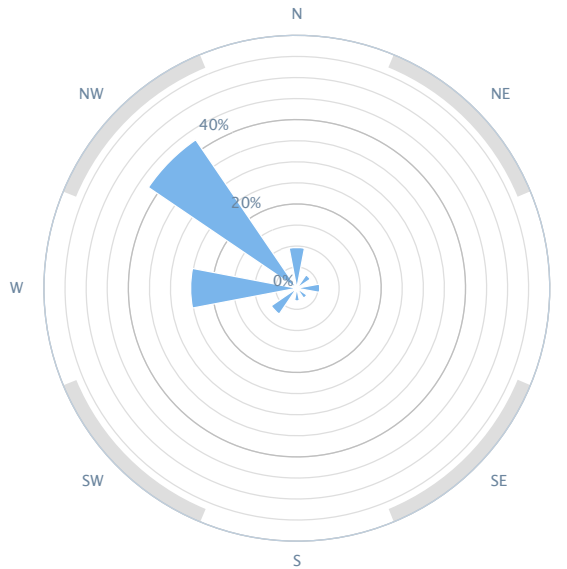
Wind Frequency Climatology at MYKONOS by Direction for June



Direction	Frequency (%)
N	45.92%
NE	8.53%
E	1.66%
SE	1.66%
S	3.08%
SW	11.66%
W	12.61%
NW	14.88%

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Wave Frequency Climatology at MYKONOS by Direction for June

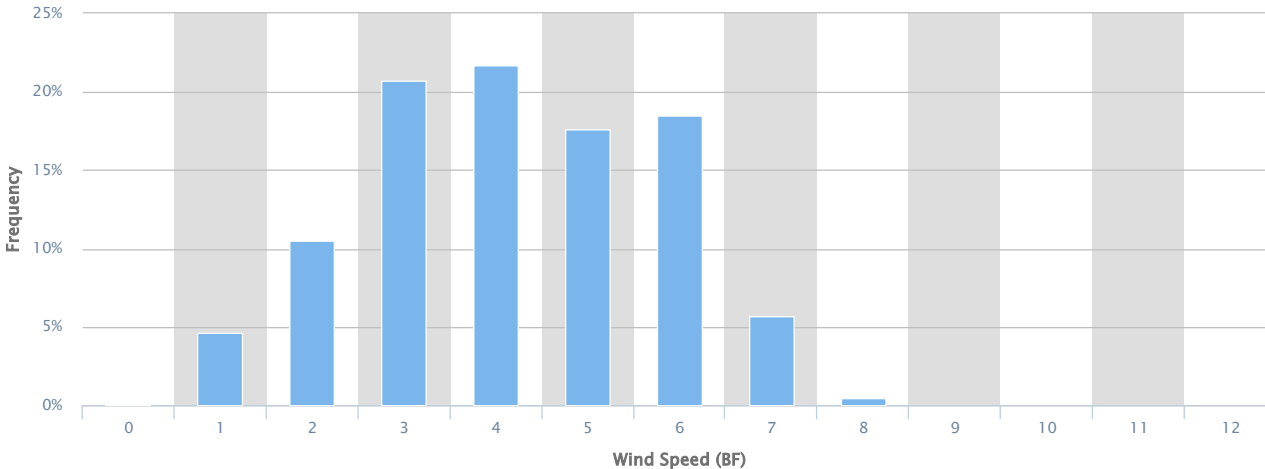


Direction	Frequency (%)
N	9.64%
NE	3.85%
E	5.42%
SE	2.86%
S	3.02%
SW	7.4%
W	25.21%
NW	42.6%

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Wind Frequency Climatology at MYKONOS by Speed for June

■ Frequency (below threshold) ■ Frequency (above threshold)

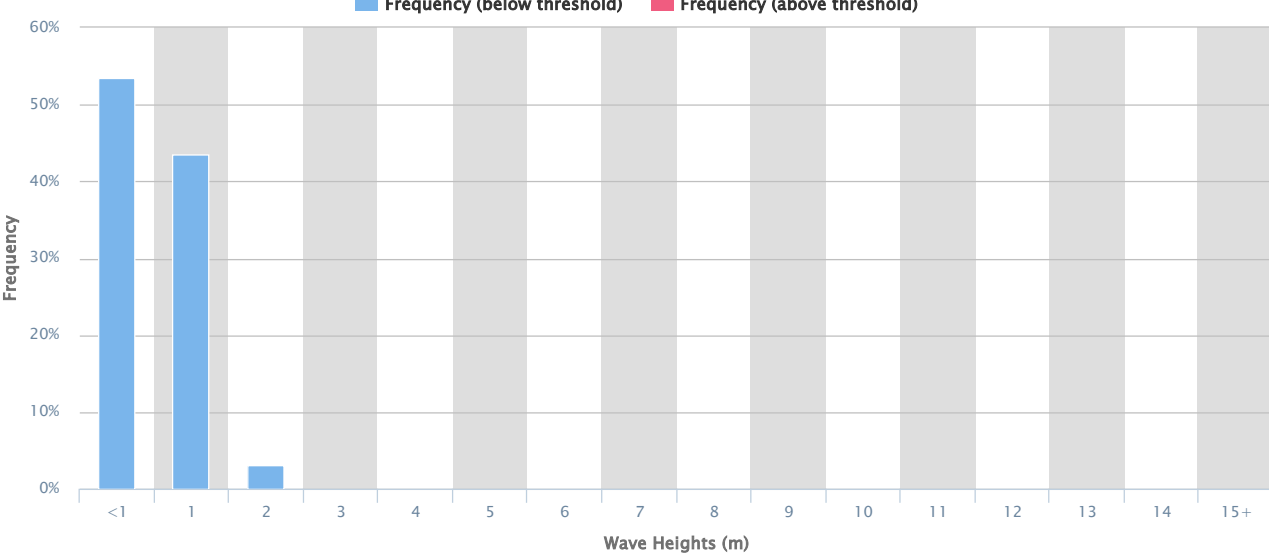


Wind Speed (BF)	Frequency (%)
0	0.09%
1	4.64%
2	10.52%
3	20.76%
4	21.71%
5	17.63%
6	18.48%
7	5.69%
8	0.47%
9	0%
10	0%
11	0%
12	0%

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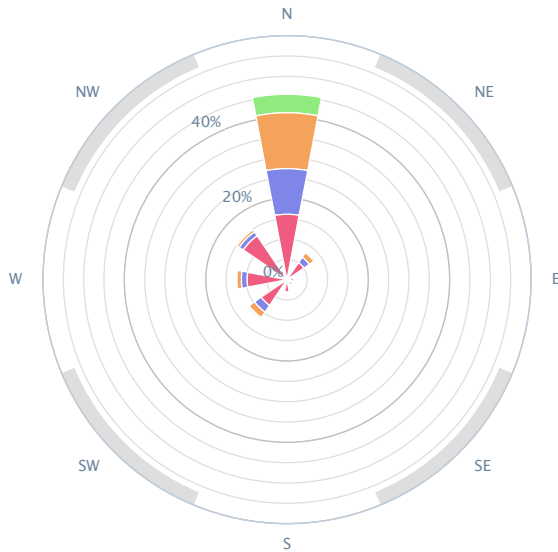
Wave Height Frequency Climatology at MYKONOS for June



Wave Heights (m)	Frequency (%)
<1	53.44%
1	43.54%
2	3.02%
3	0%
4	0%
5	0%
6	0%
7	0%
8	0%
9	0%
10	0%
11	0%
12	0%
13	0%
14	0%
15+	0%

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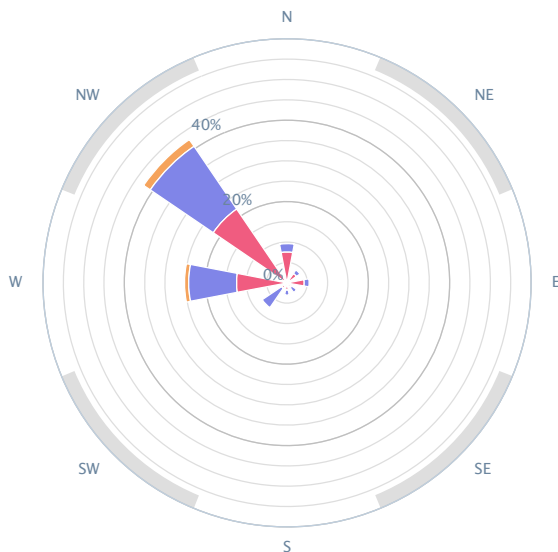
Climatology of Wind Direction and Speed Frequency at MYKONOS for June



	<=BF 4	BF 5	BF 6	BF 7	BF 8	BF 9+
N	16.07%	11.23%	13.74%	4.55%	0.33%	0%
NE	5.02%	1.61%	1.33%	0.43%	0.14%	0%
E	1.66%	0%	0%	0%	0%	0%
SE	1.56%	0.09%	0%	0%	0%	0%
S	2.99%	0.09%	0%	0%	0%	0%
SW	7.63%	1.99%	1.66%	0.38%	0%	0%
W	9.81%	1.42%	1.09%	0.28%	0%	0%
NW	12.99%	1.18%	0.66%	0.05%	0%	0%

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Climatology of Wave Direction and Height Frequency at MYKONOS for June

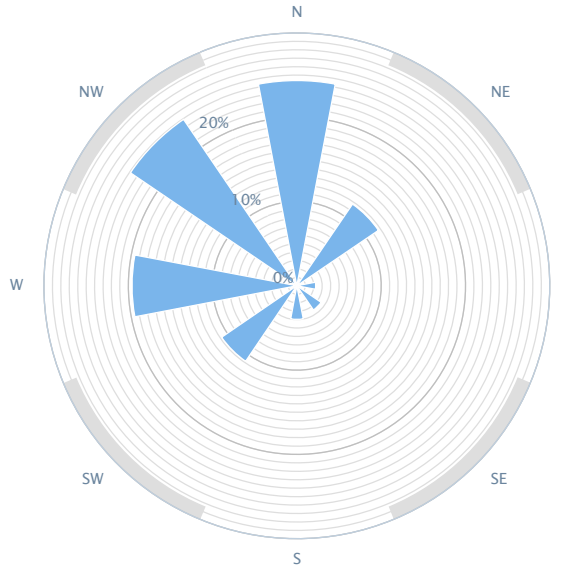


	<1.0m	1-2m	2-3m	3-4m	4-5m	5m+
N	7.55%	2.08%	0%	0%	0%	0%
NE	2.76%	1.09%	0%	0%	0%	0%
E	4.17%	1.25%	0%	0%	0%	0%
SE	1.35%	1.51%	0%	0%	0%	0%
S	1.72%	1.3%	0%	0%	0%	0%
SW	1.56%	5.83%	0%	0%	0%	0%
W	12.4%	11.77%	1.04%	0%	0%	0%
NW	21.93%	18.7%	1.98%	0%	0%	0%

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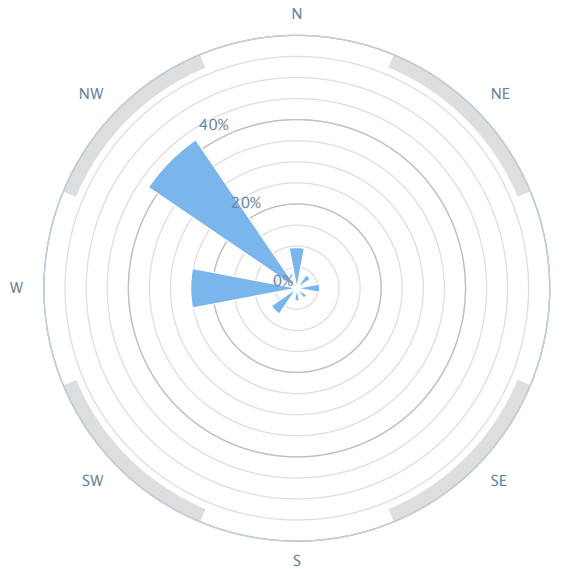
Wind Frequency Climatology at MARMARIS by Direction for June



Direction	Frequency (%)
N	24.36%
NE	11.71%
E	2.23%
SE	3.46%
S	3.98%
SW	10.81%
W	19.57%
NW	23.89%

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Wave Frequency Climatology at MARMARIS by Direction for June

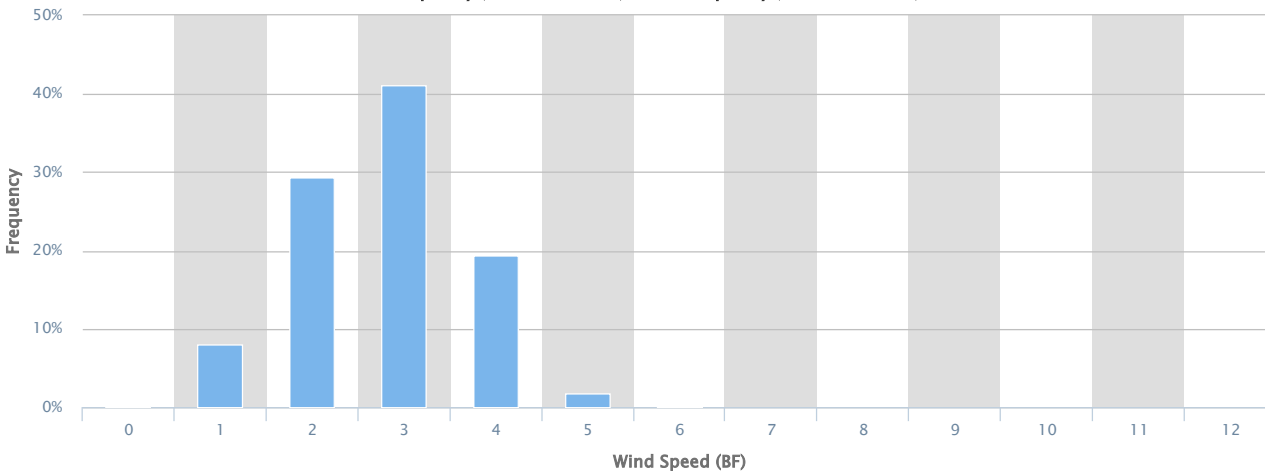


Direction	Frequency (%)
N	9.64%
NE	3.85%
E	5.42%
SE	2.86%
S	3.02%
SW	7.4%
W	25.21%
NW	42.6%

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Wind Frequency Climatology at MARMARIS by Speed for June

■ Frequency (below threshold) ■ Frequency (above threshold)

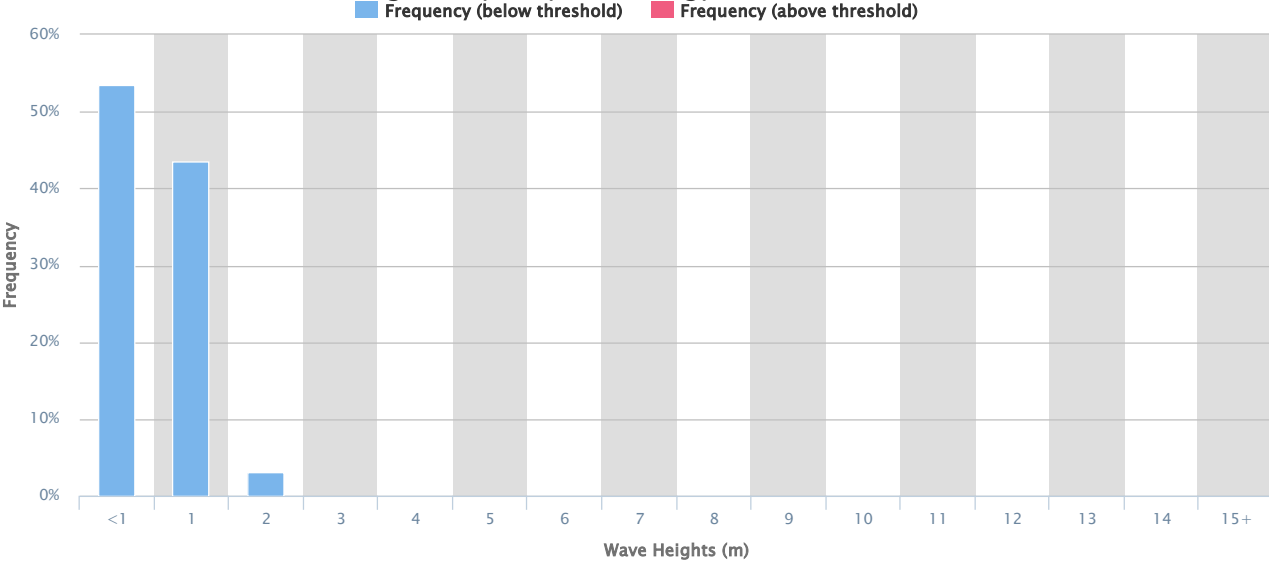


Wind Speed (BF)	Frequency (%)
0	0.19%
1	7.96%
2	29.29%
3	41.14%
4	19.43%
5	1.8%
6	0.19%
7	0%
8	0%
9	0%
10	0%
11	0%
12	0%

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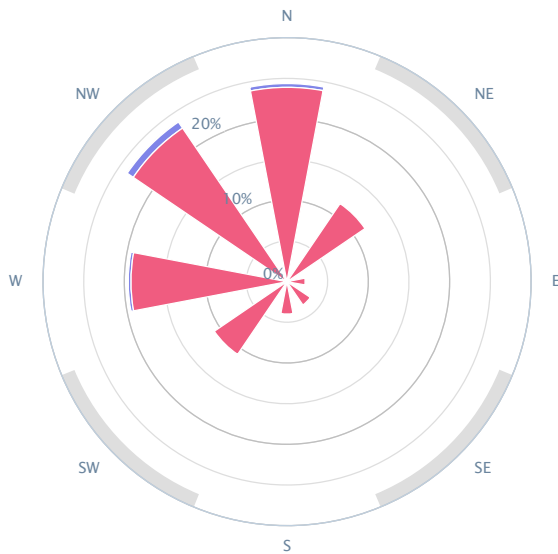
Wave Height Frequency Climatology at MARMARIS for June



Wave Heights (m)	Frequency (%)
<1	53.44%
1	43.54%
2	3.02%
3	0%
4	0%
5	0%
6	0%
7	0%
8	0%
9	0%
10	0%
11	0%
12	0%
13	0%
14	0%
15+	0%

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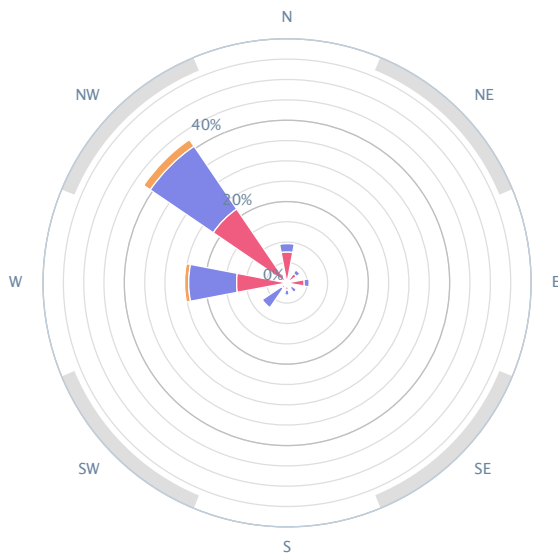
Climatology of Wind Direction and Speed Frequency at MARMARIS for June



	<=BF 4	BF 5	BF 6	BF 7	BF 8	BF 9+
N	23.89%	0.47%	0%	0%	0%	0%
NE	11.61%	0.09%	0%	0%	0%	0%
E	2.23%	0%	0%	0%	0%	0%
SE	3.46%	0%	0%	0%	0%	0%
S	3.98%	0%	0%	0%	0%	0%
SW	10.81%	0%	0%	0%	0%	0%
W	19.19%	0.33%	0.05%	0%	0%	0%
NW	22.84%	0.9%	0.14%	0%	0%	0%

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Climatology of Wave Direction and Height Frequency at MARMARIS for June



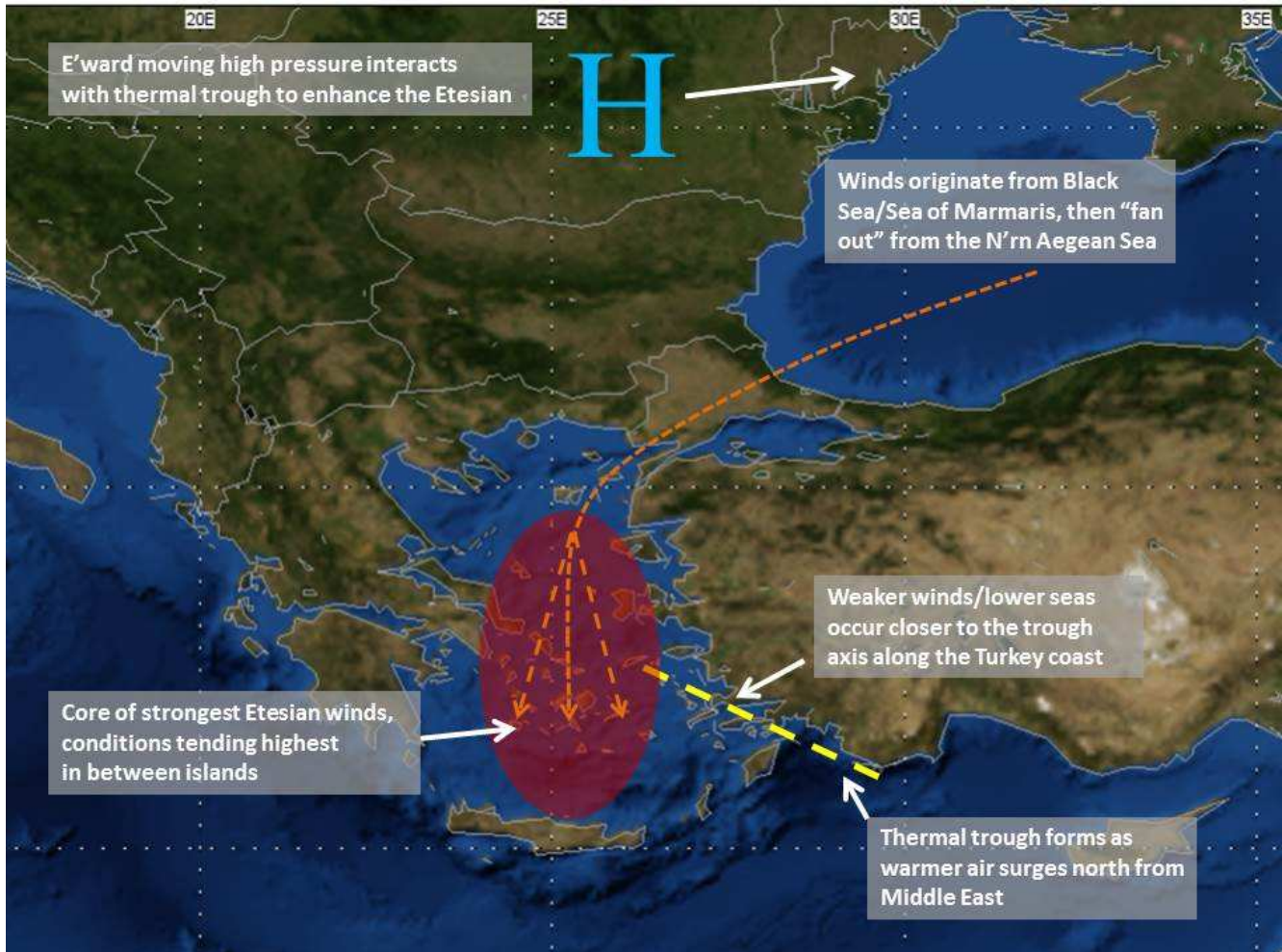
	<1.0m	1-2m	2-3m	3-4m	4-5m	5m+
N	7.55%	2.08%	0%	0%	0%	0%
NE	2.76%	1.09%	0%	0%	0%	0%
E	4.17%	1.25%	0%	0%	0%	0%
SE	1.35%	1.51%	0%	0%	0%	0%
S	1.72%	1.3%	0%	0%	0%	0%
SW	1.56%	5.83%	0%	0%	0%	0%
W	12.4%	11.77%	1.04%	0%	0%	0%
NW	21.93%	18.7%	1.98%	0%	0%	0%

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Graphic of Weather Features for Aegean Sea/Turkey:



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Recommendations/Conclusions: The month of June will offer the best relative 4 week period of weather conditions for the summer, as Etesian wind events become slightly more frequent and stronger later in the summer. This is due to two main reasons. The first is that frontal/trough passages are less frequent over E'rn Europe later in the summer, which are partly responsible for a weakening of the thermal trough over the Aegean Sea. The second reason is that temperatures across the Middle East become warmer as the summer progresses, which yields a stronger thermal trough. However, gale force N'ly winds still occur during June, but there are steps that can be taken to minimize the influence of these events.

It will be best to venture into most exposed waters of the Central Aegean (Mykonos, Santorini, etc) when slight N'ward shifts in the location of the thermal trough axis over the Aegean Sea occur. This will result in a slackening of the pressure gradient, and lulls in the Etesian N'lys will normally persist approximately 1-2 days at a time. Additionally, "brief" breaks in the weather can occur, in the more rare cases, when weakening E'ward moving low pressure troughs pass to the north of the area, while the thermal trough is farther south and significantly weaker than normal.

During the stronger Etesian events, it is recommended to remain in more protected waters along the W'rn Turkey coast when winds will be lighter in the trough axis. The best port of call will be highly dependent on the exact orientation of the trough. It is important to note that offshore NW-N-NE'ly wind surges can still occur across these waters on a localized basis during the late evening/overnight hours, as relatively cooler air propagates from higher elevations down to lower elevations (i.e. katabatic effects). This is especially the case abeam mountain passes and valleys.

For Athens and surrounding waters, the near coastal waters will tend to be very well protected from any significant building of seas. However, N'ly gale force winds can occur when the thermal trough is strongest and oriented more southeast to northwest (i.e. thermal trough axis in place over the N'rn Aegean Sea). During weaker Etesians, the core of strongest winds will usually remain east of 24E, although nighttime wind surges can occur in a similar scenario as along the Turkish Riviera.

If the vessel is located over the Central Aegean Sea during an Etesian event, it is advised to remain anchored on the S'rn sides of islands (away from mountain passes) to limit the fetch for building seas. Seas will tend to be highest and shortest in period on the N'rn sides of islands and especially in between islands, where enhancement from funneling effects can occur. If traveling between islands is required, it will usually be best to do so during the overnight and early morning hours as winds will peak in strength during the afternoon/early evening hours with the peak heating of the day. When the thermal trough interacts with high pressure to the north, it will make little difference for the time of day to travel as winds will be consistently high throughout the day.

Trust the above assists. Please advise if you have any questions or comments regarding the above. Many thanks.

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