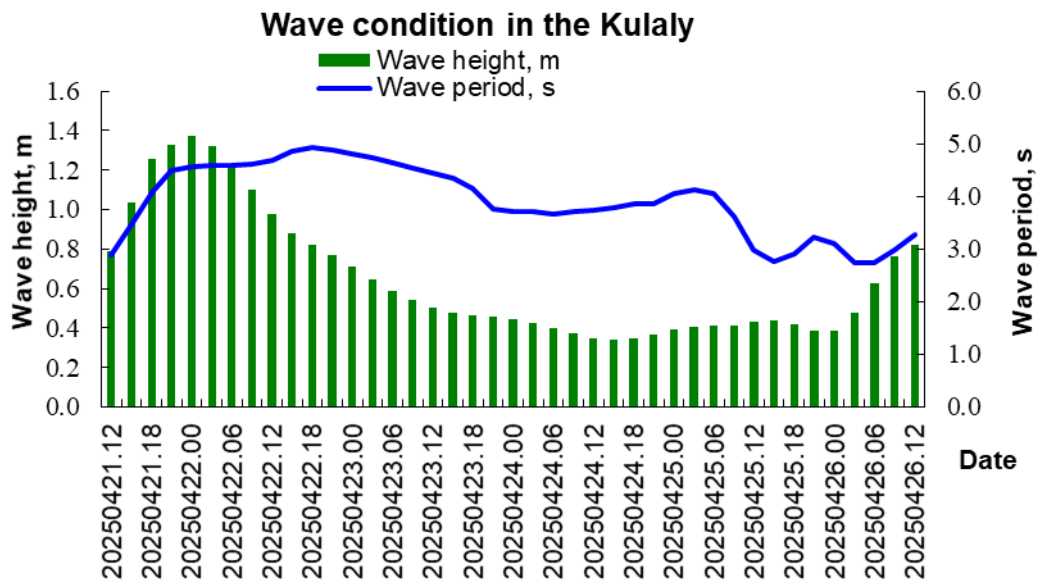
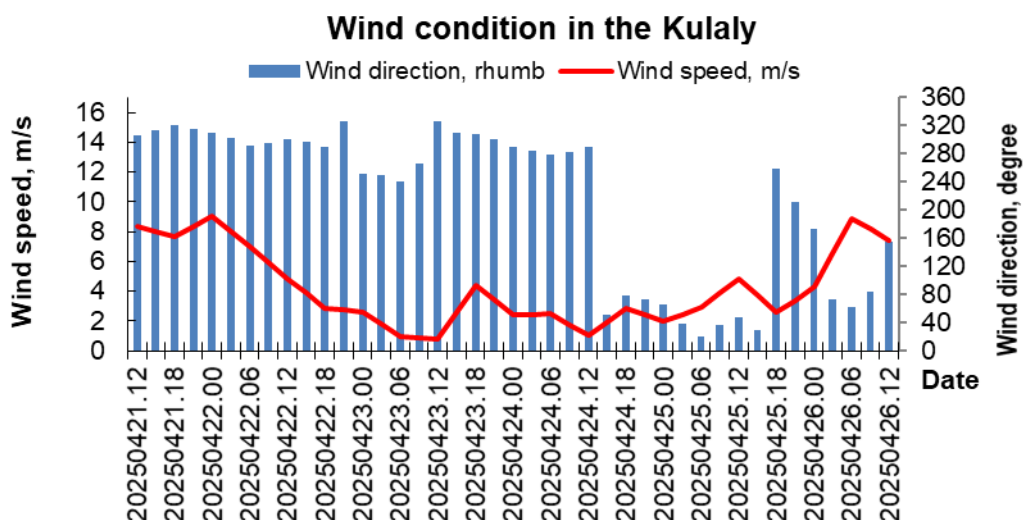




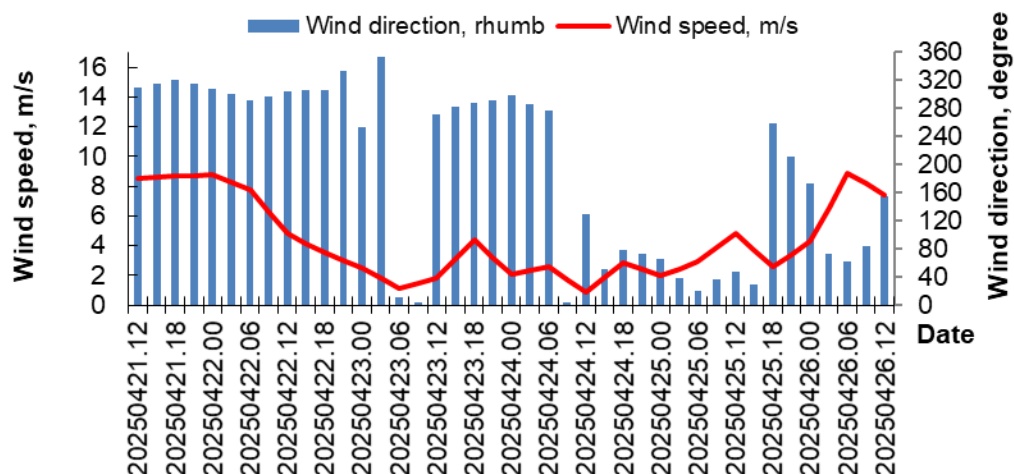
**MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»**

**Wave and wind forecast for the Kazakhstan part of the Caspian Sea with a 5-day advance
using SWAN spectral model for the period April 21 – 26, 2025.**

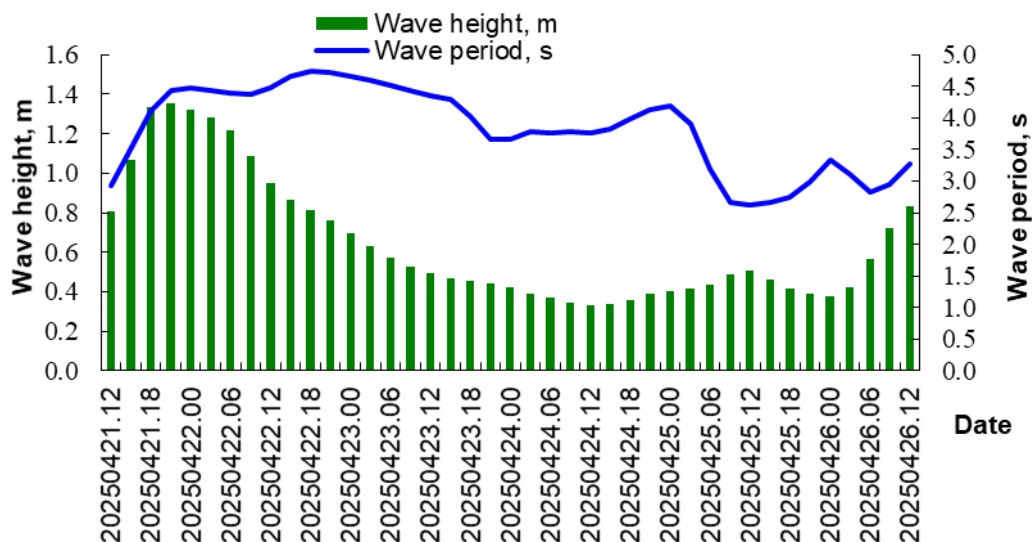


Date time	Kulaly				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250421.12	0.79	SE	2.9	8	NW
20250421.15	1.04	SE	3.5	8	NW
20250421.18	1.26	SE	4.1	8	NW
20250421.21	1.33	SE	4.5	8	NW
20250422.00	1.38	SE	4.6	9	NW
20250422.03	1.32	SE	4.6	8	NW
20250422.06	1.22	SE	4.6	7	W
20250422.09	1.10	SE	4.6	6	NW
20250422.12	0.98	SE	4.7	5	NW
20250422.15	0.88	SE	4.9	4	NW
20250422.18	0.82	SE	4.9	3	W
20250422.21	0.77	SE	4.9	3	NW
20250423.00	0.71	SE	4.8	3	W
20250423.03	0.65	SE	4.7	2	W
20250423.06	0.59	SE	4.6	1	SW
20250423.09	0.54	SE	4.5	1	W
20250423.12	0.50	SE	4.4	1	NW
20250423.15	0.48	SE	4.4	3	NW
20250423.18	0.46	SE	4.1	4	NW
20250423.21	0.46	SE	3.8	3	NW
20250424.00	0.44	SE	3.7	2	W
20250424.03	0.42	SE	3.7	2	W
20250424.06	0.40	SE	3.7	2	W
20250424.09	0.37	SE	3.7	2	W
20250424.12	0.35	SE	3.7	1	W
20250424.15	0.34	SE	3.8	2	NE
20250424.18	0.34	SE	3.9	3	E
20250424.21	0.37	SE	3.9	2	E
20250425.00	0.39	SE	4.1	2	NE
20250425.03	0.41	SE	4.1	2	NE
20250425.06	0.41	SE	4.1	3	N
20250425.09	0.41	SE	3.6	4	NE
20250425.12	0.43	SE	3.0	5	NE
20250425.15	0.44	SE	2.8	4	NE
20250425.18	0.42	E	2.9	3	W
20250425.21	0.38	E	3.2	3	SW
20250426.00	0.39	E	3.1	4	S
20250426.03	0.47	NE	2.7	7	E
20250426.06	0.62	NE	2.7	9	NE
20250426.09	0.76	N	3.0	8	E
20250426.12	0.82	N	3.3	7	SE

Wind condition in the Fort-Shevchenko

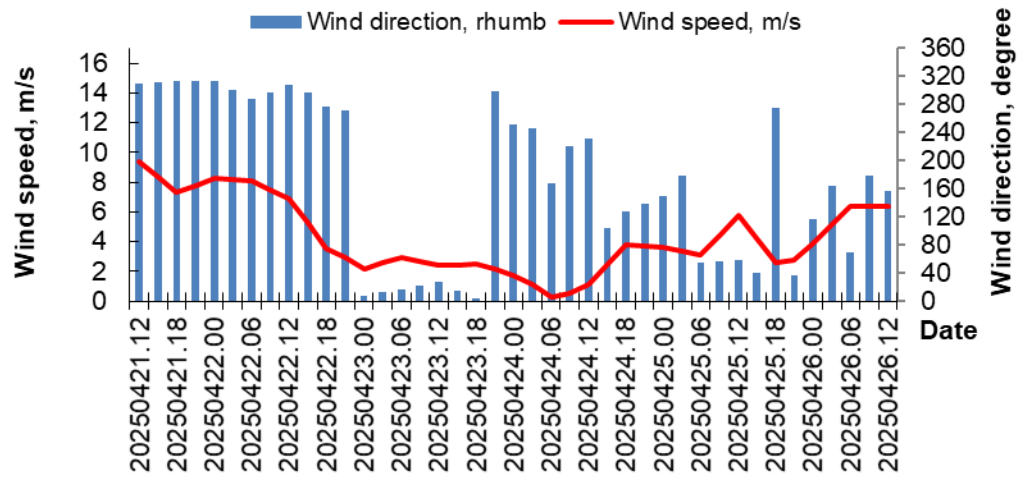


Wave condition in the Fort-Shevchenko

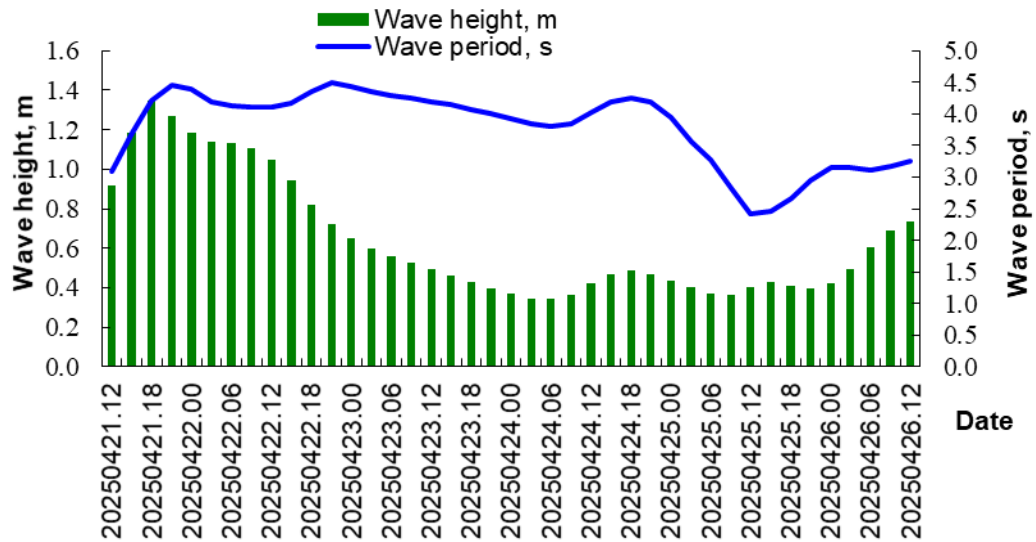


Date time	Fort-Shevchenko				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250421.12	0.81	SE	2.9	9	NW
20250421.15	1.07	SE	3.5	9	NW
20250421.18	1.33	SE	4.1	9	NW
20250421.21	1.35	SE	4.4	9	NW
20250422.00	1.32	SE	4.5	9	NW
20250422.03	1.28	SE	4.4	8	NW
20250422.06	1.22	SE	4.4	8	W
20250422.09	1.08	SE	4.4	6	NW
20250422.12	0.95	SE	4.5	5	NW
20250422.15	0.86	SE	4.7	4	NW
20250422.18	0.81	SE	4.7	4	NW
20250422.21	0.76	SE	4.7	3	NW
20250423.00	0.70	SE	4.7	3	W
20250423.03	0.63	SE	4.6	2	N
20250423.06	0.57	SE	4.5	1	N
20250423.09	0.53	SE	4.4	1	N
20250423.12	0.49	SE	4.3	2	W
20250423.15	0.47	SE	4.3	3	W
20250423.18	0.45	SE	4.0	4	W
20250423.21	0.44	SE	3.7	3	W
20250424.00	0.42	SE	3.7	2	NW
20250424.03	0.39	SE	3.8	2	W
20250424.06	0.37	SE	3.8	3	W
20250424.09	0.35	SE	3.8	2	N
20250424.12	0.33	SE	3.8	1	SE
20250424.15	0.34	SE	3.8	2	NE
20250424.18	0.36	SE	4.0	3	E
20250424.21	0.39	SE	4.1	2	E
20250425.00	0.41	SE	4.2	2	NE
20250425.03	0.41	SE	3.9	2	NE
20250425.06	0.44	SE	3.2	3	N
20250425.09	0.49	E	2.7	4	NE
20250425.12	0.51	E	2.6	5	NE
20250425.15	0.46	E	2.7	4	NE
20250425.18	0.42	E	2.7	3	W
20250425.21	0.39	E	3.0	3	SW
20250426.00	0.38	E	3.3	4	S
20250426.03	0.42	NE	3.1	7	E
20250426.06	0.56	NE	2.8	9	NE
20250426.09	0.72	N	2.9	8	E
20250426.12	0.83	N	3.3	7	SE

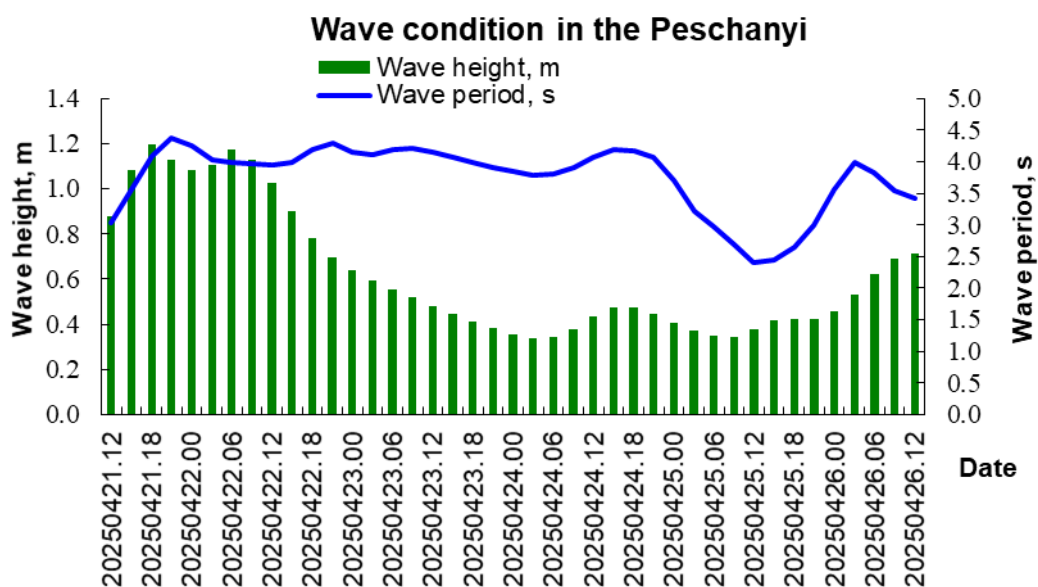
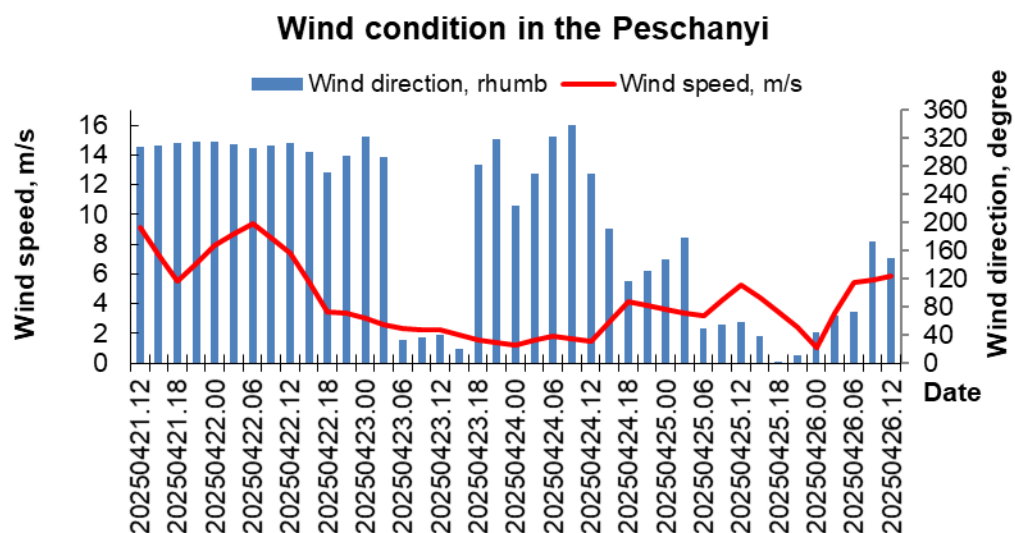
Wind condition in the Aktau



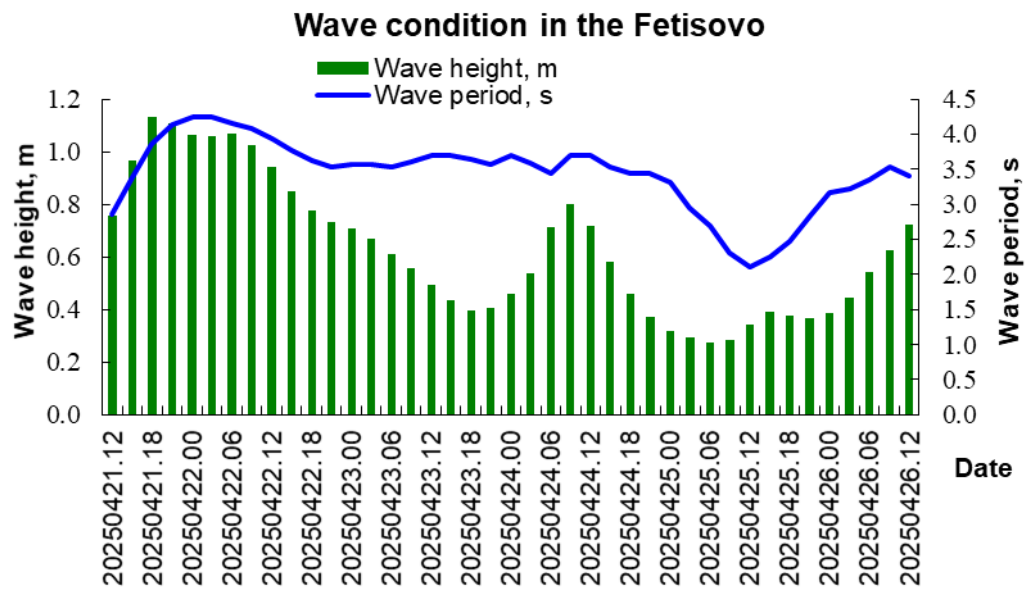
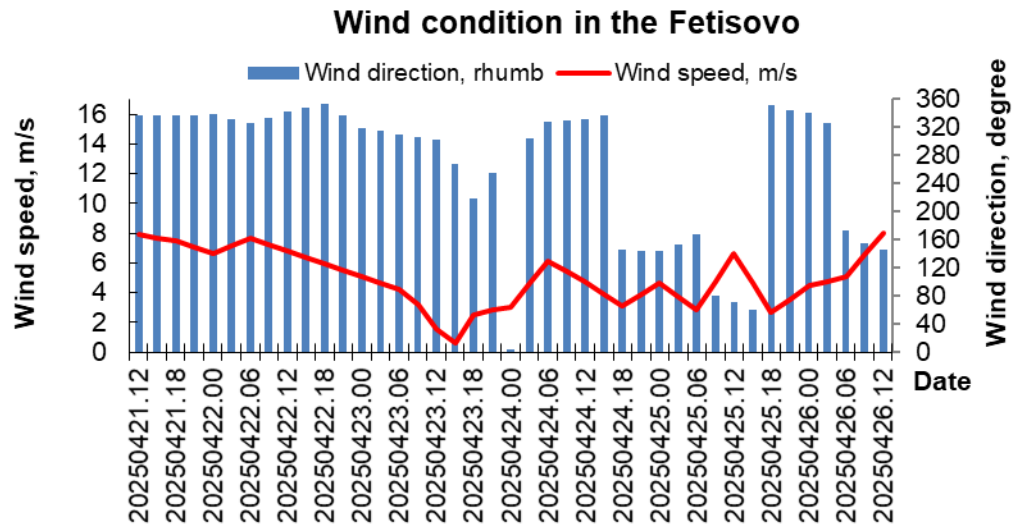
Wave condition in the Aktau



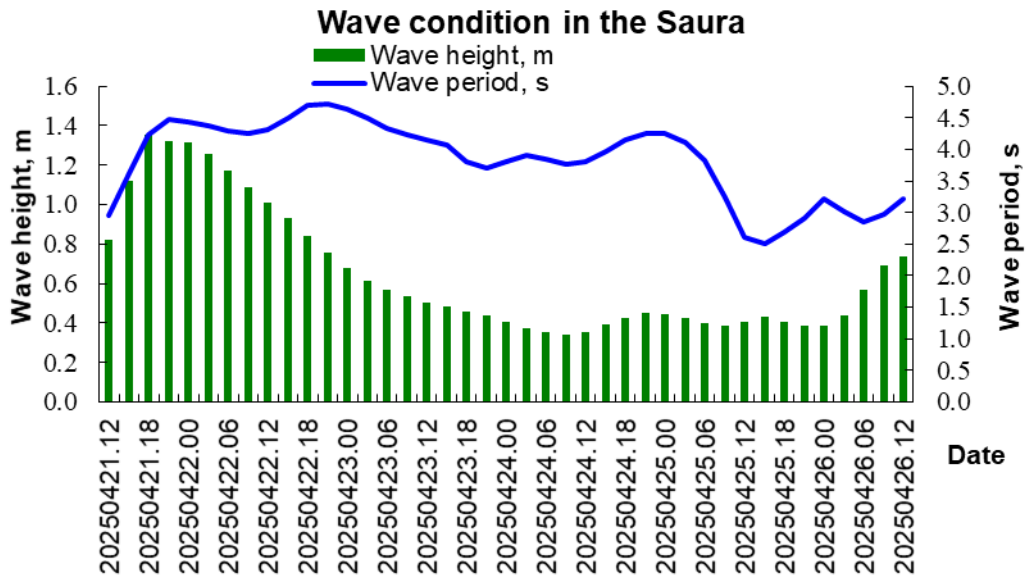
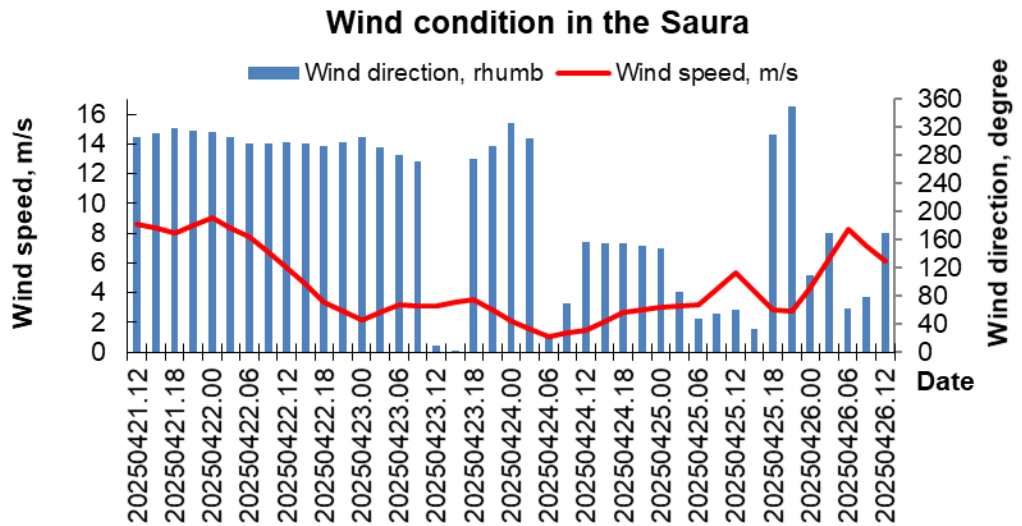
Date time	Aktau				
	Wave height, m	Направление волны, румб	Wave height, m	Скорость ветра, м/с	Wave height, m
20250421.12	0.92	SE	3.1	9	NW
20250421.15	1.18	SE	3.7	8	NW
20250421.18	1.35	SE	4.2	7	NW
20250421.21	1.27	SE	4.4	8	NW
20250422.00	1.18	SE	4.4	8	NW
20250422.03	1.14	SE	4.2	8	NW
20250422.06	1.13	SE	4.1	8	W
20250422.09	1.11	SE	4.1	8	NW
20250422.12	1.05	SE	4.1	7	NW
20250422.15	0.94	SE	4.2	5	NW
20250422.18	0.82	SE	4.4	4	W
20250422.21	0.72	SE	4.5	3	W
20250423.00	0.65	SE	4.4	2	N
20250423.03	0.60	SE	4.4	3	N
20250423.06	0.56	SE	4.3	3	N
20250423.09	0.53	SE	4.2	3	N
20250423.12	0.50	SE	4.2	2	NE
20250423.15	0.46	SE	4.1	2	N
20250423.18	0.43	SE	4.1	3	N
20250423.21	0.40	SE	4.0	2	NW
20250424.00	0.37	SE	3.9	2	W
20250424.03	0.35	SE	3.9	1	SW
20250424.06	0.34	SE	3.8	0	S
20250424.09	0.37	SE	3.8	1	SW
20250424.12	0.42	SE	4.0	1	SW
20250424.15	0.47	SE	4.2	2	E
20250424.18	0.49	SE	4.2	4	SE
20250424.21	0.47	SE	4.2	4	SE
20250425.00	0.44	SE	3.9	4	SE
20250425.03	0.40	SE	3.6	3	S
20250425.06	0.37	SE	3.3	3	NE
20250425.09	0.36	SE	2.8	4	NE
20250425.12	0.40	E	2.4	6	NE
20250425.15	0.43	NE	2.5	4	NE
20250425.18	0.41	NE	2.7	3	W
20250425.21	0.40	NE	2.9	3	NE
20250426.00	0.42	NE	3.1	4	SE
20250426.03	0.49	NE	3.2	5	S
20250426.06	0.60	NE	3.1	6	E
20250426.09	0.69	NE	3.2	6	S
20250426.12	0.74	NE	3.2	6	SE



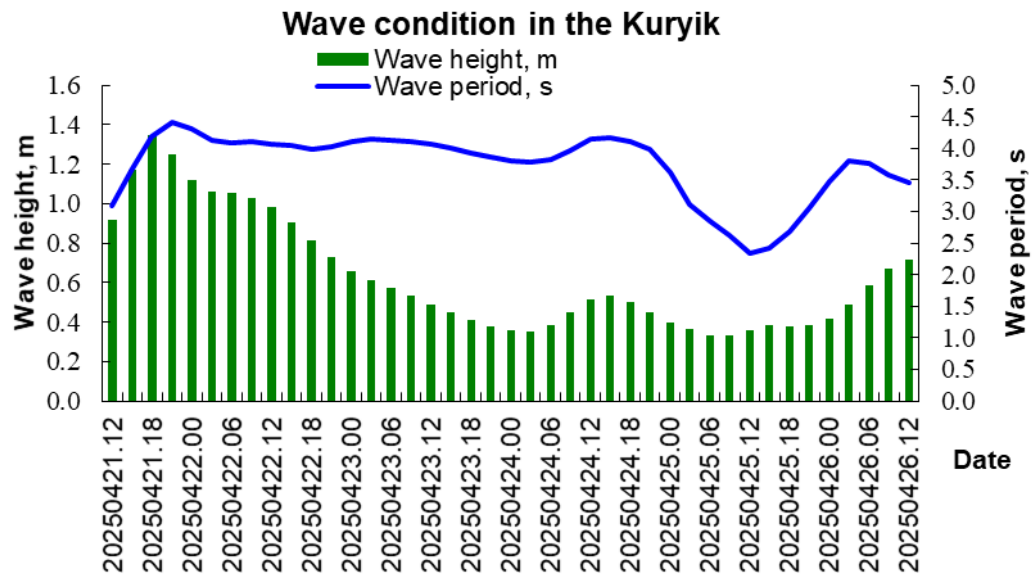
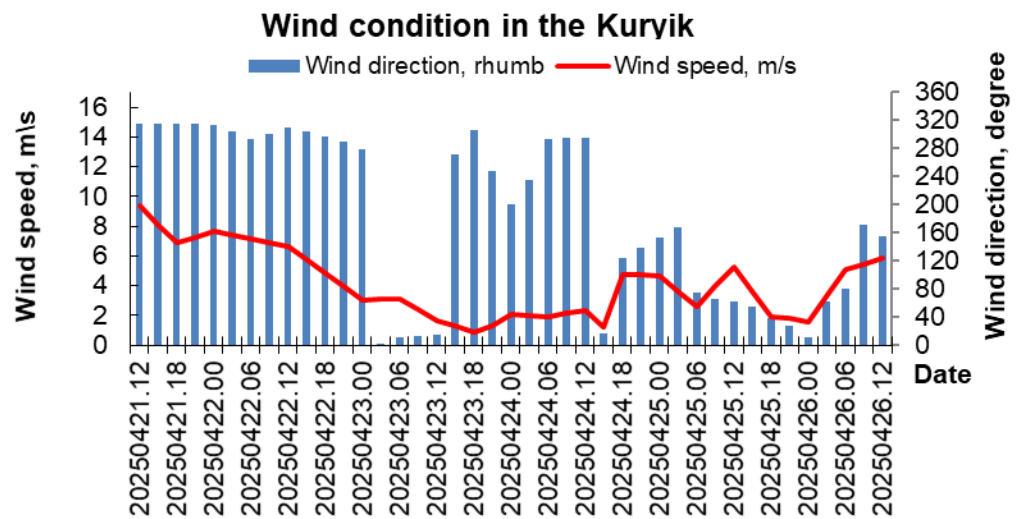
Date time	Peschanyi (Isan)				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250421.12	0.88	SE	3.0	9	NW
20250421.15	1.08	SE	3.6	7	NW
20250421.18	1.20	SE	4.1	6	NW
20250421.21	1.13	SE	4.4	7	NW
20250422.00	1.08	SE	4.3	8	NW
20250422.03	1.11	SE	4.0	9	NW
20250422.06	1.17	SE	4.0	9	NW
20250422.09	1.13	SE	4.0	8	NW
20250422.12	1.03	SE	3.9	7	NW
20250422.15	0.90	SE	4.0	5	NW
20250422.18	0.78	SE	4.2	3	W
20250422.21	0.70	SE	4.3	3	NW
20250423.00	0.64	SE	4.1	3	NW
20250423.03	0.59	SE	4.1	3	NW
20250423.06	0.55	SE	4.2	2	NE
20250423.09	0.52	SE	4.2	2	NE
20250423.12	0.48	SE	4.2	2	NE
20250423.15	0.45	SE	4.1	2	N
20250423.18	0.41	SE	4.0	2	W
20250423.21	0.38	SE	3.9	1	NW
20250424.00	0.35	SE	3.8	1	SW
20250424.03	0.34	SE	3.8	2	W
20250424.06	0.35	SE	3.8	2	NW
20250424.09	0.38	SE	3.9	2	N
20250424.12	0.44	SE	4.1	1	W
20250424.15	0.48	SE	4.2	3	S
20250424.18	0.48	SE	4.2	4	SE
20250424.21	0.44	SE	4.1	4	SE
20250425.00	0.41	SE	3.7	4	SE
20250425.03	0.37	SE	3.2	3	S
20250425.06	0.35	SE	3.0	3	NE
20250425.09	0.34	SE	2.7	4	NE
20250425.12	0.38	NE	2.4	5	NE
20250425.15	0.42	NE	2.4	4	NE
20250425.18	0.42	NE	2.6	3	N
20250425.21	0.42	NE	3.0	2	N
20250426.00	0.46	NE	3.6	1	NE
20250426.03	0.53	NE	4.0	3	NE
20250426.06	0.62	NE	3.8	5	E
20250426.09	0.69	NE	3.6	6	S
20250426.12	0.72	NE	3.4	6	SE



Date time	Fetisovo				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250421.12	0.76	SE	2.9	8	NW
20250421.15	0.97	SE	3.4	8	NW
20250421.18	1.13	SE	3.9	7	NW
20250421.21	1.11	SE	4.1	7	N
20250422.00	1.06	SE	4.3	7	N
20250422.03	1.06	SE	4.2	7	NW
20250422.06	1.07	SE	4.2	8	NW
20250422.09	1.03	SE	4.1	7	NW
20250422.12	0.94	SE	3.9	7	N
20250422.15	0.85	SE	3.8	6	N
20250422.18	0.78	SE	3.6	6	N
20250422.21	0.73	SE	3.5	6	NW
20250423.00	0.71	SE	3.6	5	NW
20250423.03	0.67	SE	3.6	5	NW
20250423.06	0.61	SE	3.5	4	NW
20250423.09	0.56	SE	3.6	3	NW
20250423.12	0.49	SE	3.7	2	NW
20250423.15	0.43	SE	3.7	1	W
20250423.18	0.39	SE	3.7	2	SW
20250423.21	0.41	SE	3.6	3	W
20250424.00	0.46	SE	3.7	3	N
20250424.03	0.54	SE	3.6	5	NW
20250424.06	0.71	SE	3.4	6	NW
20250424.09	0.80	SE	3.7	5	NW
20250424.12	0.72	SE	3.7	5	NW
20250424.15	0.58	SE	3.5	4	N
20250424.18	0.46	SE	3.4	3	SE
20250424.21	0.37	SE	3.4	4	SE
20250425.00	0.32	SE	3.3	5	SE
20250425.03	0.29	SE	3.0	4	SE
20250425.06	0.27	SE	2.7	3	S
20250425.09	0.28	E	2.3	5	E
20250425.12	0.34	N	2.1	7	E
20250425.15	0.39	N	2.2	5	NE
20250425.18	0.38	NE	2.5	3	N
20250425.21	0.37	NE	2.8	4	N
20250426.00	0.38	NE	3.2	4	N
20250426.03	0.45	NE	3.2	5	NW
20250426.06	0.54	NE	3.4	5	S
20250426.09	0.62	NE	3.5	7	SE
20250426.12	0.72	NE	3.4	8	SE



Date time	Saura				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250421.12	0.82	SE	2.9	9	NW
20250421.15	1.12	SE	3.6	8	NW
20250421.18	1.35	SE	4.2	8	NW
20250421.21	1.32	SE	4.5	9	NW
20250422.00	1.31	SE	4.4	9	NW
20250422.03	1.26	SE	4.4	8	NW
20250422.06	1.17	SE	4.3	8	NW
20250422.09	1.09	SE	4.3	7	NW
20250422.12	1.01	SE	4.3	6	NW
20250422.15	0.93	SE	4.5	5	NW
20250422.18	0.84	SE	4.7	3	NW
20250422.21	0.75	SE	4.7	3	NW
20250423.00	0.68	SE	4.6	2	NW
20250423.03	0.62	SE	4.5	3	W
20250423.06	0.57	SE	4.3	3	W
20250423.09	0.53	SE	4.2	3	W
20250423.12	0.51	SE	4.2	3	N
20250423.15	0.48	SE	4.1	3	N
20250423.18	0.46	SE	3.8	4	W
20250423.21	0.44	SE	3.7	3	NW
20250424.00	0.40	SE	3.8	2	NW
20250424.03	0.37	SE	3.9	2	NW
20250424.06	0.35	SE	3.8	1	N
20250424.09	0.34	SE	3.8	1	E
20250424.12	0.35	SE	3.8	1	SE
20250424.15	0.39	SE	4.0	2	SE
20250424.18	0.43	SE	4.2	3	SE
20250424.21	0.45	SE	4.3	3	SE
20250425.00	0.45	SE	4.3	3	SE
20250425.03	0.43	SE	4.1	3	E
20250425.06	0.40	SE	3.8	3	NE
20250425.09	0.39	SE	3.2	4	NE
20250425.12	0.41	SE	2.6	5	NE
20250425.15	0.43	E	2.5	4	NE
20250425.18	0.41	E	2.7	3	NW
20250425.21	0.39	E	2.9	3	N
20250426.00	0.39	E	3.2	4	E
20250426.03	0.44	NE	3.0	6	S
20250426.06	0.57	NE	2.9	8	NE
20250426.09	0.69	NE	3.0	7	E
20250426.12	0.74	N	3.2	6	S



Date time	Kuryk				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250421.12	0.91	SE	3.1	9	NW
20250421.15	1.17	SE	3.7	8	NW
20250421.18	1.34	SE	4.2	7	NW
20250421.21	1.25	SE	4.4	7	NW
20250422.00	1.12	SE	4.3	8	NW
20250422.03	1.06	SE	4.1	7	NW
20250422.06	1.05	SE	4.1	7	NW
20250422.09	1.03	SE	4.1	7	NW
20250422.12	0.99	SE	4.1	7	NW
20250422.15	0.91	SE	4.0	6	NW
20250422.18	0.82	SE	4.0	5	NW
20250422.21	0.73	SE	4.0	4	W
20250423.00	0.66	SE	4.1	3	W
20250423.03	0.61	SE	4.1	3	N
20250423.06	0.57	SE	4.1	3	N
20250423.09	0.53	SE	4.1	2	N
20250423.12	0.49	SE	4.1	2	N
20250423.15	0.45	SE	4.0	1	W
20250423.18	0.41	SE	3.9	1	NW
20250423.21	0.38	SE	3.9	1	W
20250424.00	0.36	SE	3.8	2	S
20250424.03	0.35	SE	3.8	2	SW
20250424.06	0.38	SE	3.8	2	NW
20250424.09	0.45	SE	4.0	2	NW
20250424.12	0.51	SE	4.1	2	NW
20250424.15	0.53	SE	4.2	1	N
20250424.18	0.50	SE	4.1	5	SE
20250424.21	0.45	SE	4.0	5	SE
20250425.00	0.40	SE	3.6	5	SE
20250425.03	0.36	SE	3.1	4	S
20250425.06	0.34	SE	2.8	3	E
20250425.09	0.34	SE	2.6	4	NE
20250425.12	0.36	NE	2.3	5	NE
20250425.15	0.38	NE	2.4	4	NE
20250425.18	0.38	NE	2.7	2	NE
20250425.21	0.39	NE	3.0	2	NE
20250426.00	0.42	NE	3.5	2	N
20250426.03	0.49	NE	3.8	3	NE
20250426.06	0.59	NE	3.8	5	E
20250426.09	0.67	NE	3.6	5	S
20250426.12	0.71	NE	3.5	6	SE

**Calculation characteristics were obtained using the SWAN wave model, adapted in RSE «Kazhydromet» to the conditions of the Caspian Sea.*

Compiled by: Zhagparova N.N.

Checked by: Shishkina G.M.

RSE «Kazhydromet» – Caspian Sea Hydrometeorological Research Department

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