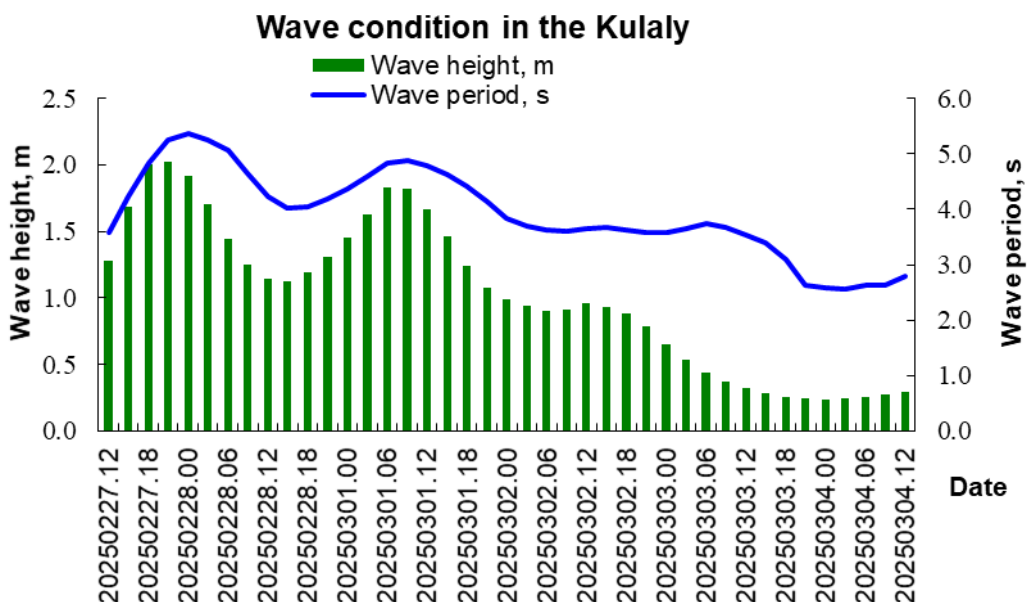
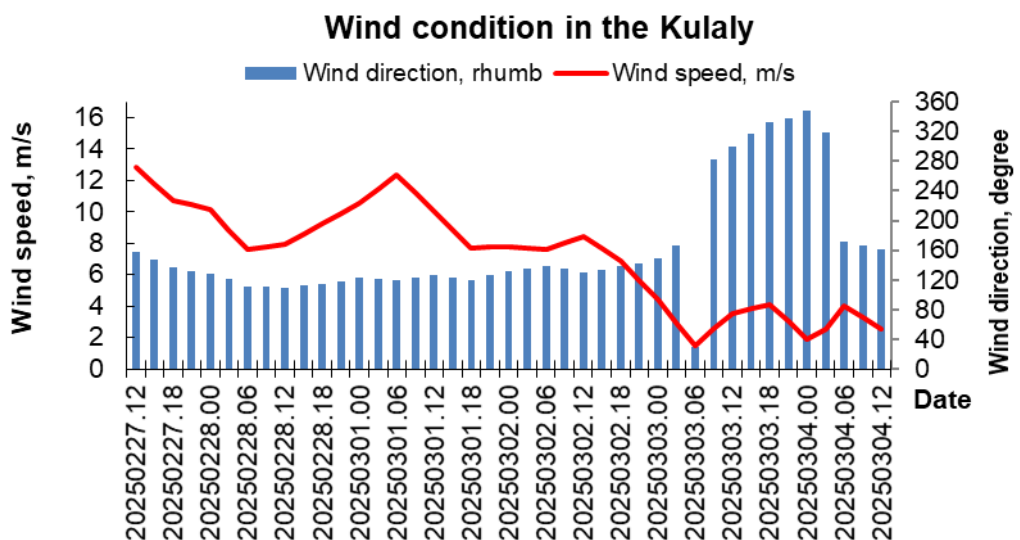




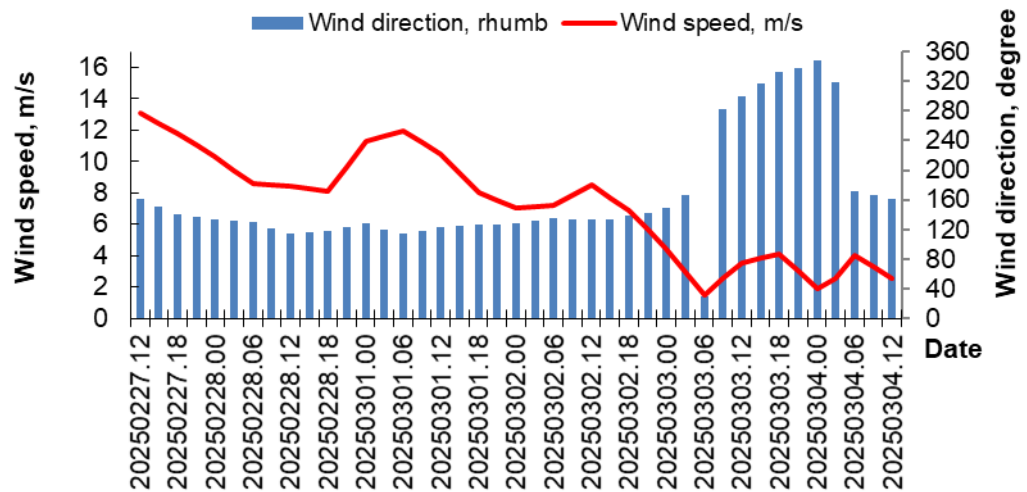
**MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»**

**Wave and wind forecast for the Kazakhstan part of the Caspian Sea with a 5-day advance
using SWAN spectral model for the period February 27 – March 04, 2025.**

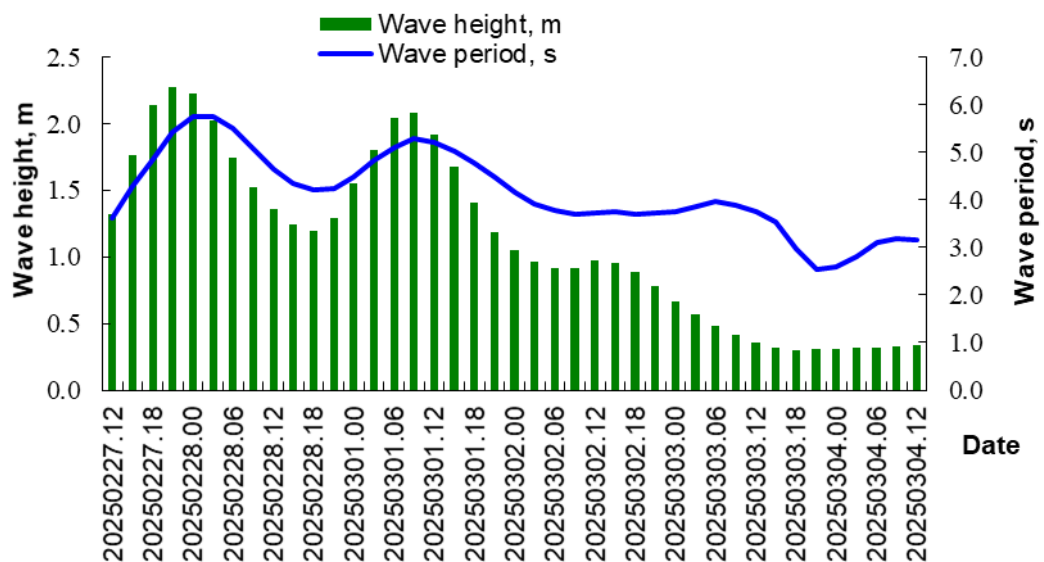


Date time	Kulaly				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250227.12	1.28	NW	3.6	13	SE
20250227.15	1.68	N	4.2	12	SE
20250227.18	2.01	N	4.8	11	SE
20250227.21	2.02	N	5.3	10	SE
20250228.00	1.91	N	5.4	10	SE
20250228.03	1.71	N	5.3	9	SE
20250228.06	1.44	NW	5.1	8	E
20250228.09	1.25	NW	4.6	8	E
20250228.12	1.15	NW	4.2	8	E
20250228.15	1.13	NW	4.0	9	E
20250228.18	1.19	NW	4.0	9	SE
20250228.21	1.31	NW	4.2	10	SE
20250301.00	1.45	NW	4.4	11	SE
20250301.03	1.63	NW	4.6	11	SE
20250301.06	1.83	NW	4.8	12	SE
20250301.09	1.82	NW	4.9	11	SE
20250301.12	1.67	NW	4.8	10	SE
20250301.15	1.47	NW	4.6	9	SE
20250301.18	1.24	NW	4.4	8	SE
20250301.21	1.08	NW	4.1	8	SE
20250302.00	0.99	NW	3.8	8	SE
20250302.03	0.94	NW	3.7	8	SE
20250302.06	0.91	NW	3.6	8	SE
20250302.09	0.92	NW	3.6	8	SE
20250302.12	0.96	NW	3.7	8	SE
20250302.15	0.94	NW	3.7	8	SE
20250302.18	0.88	NW	3.6	7	SE
20250302.21	0.79	NW	3.6	6	SE
20250303.00	0.65	NW	3.6	4	SE
20250303.03	0.53	NW	3.7	3	S
20250303.06	0.44	NW	3.7	1	NE
20250303.09	0.38	NW	3.7	3	W
20250303.12	0.32	NW	3.5	4	NW
20250303.15	0.28	NW	3.4	4	NW
20250303.18	0.25	NW	3.1	4	NW
20250303.21	0.24	NW	2.6	3	NW
20250304.00	0.24	NW	2.6	2	N
20250304.03	0.24	E	2.6	3	NW
20250304.06	0.26	E	2.6	4	S
20250304.09	0.28	E	2.6	3	S
20250304.12	0.29	E	2.8	3	S

Wind condition in the Fort-Shevchenko

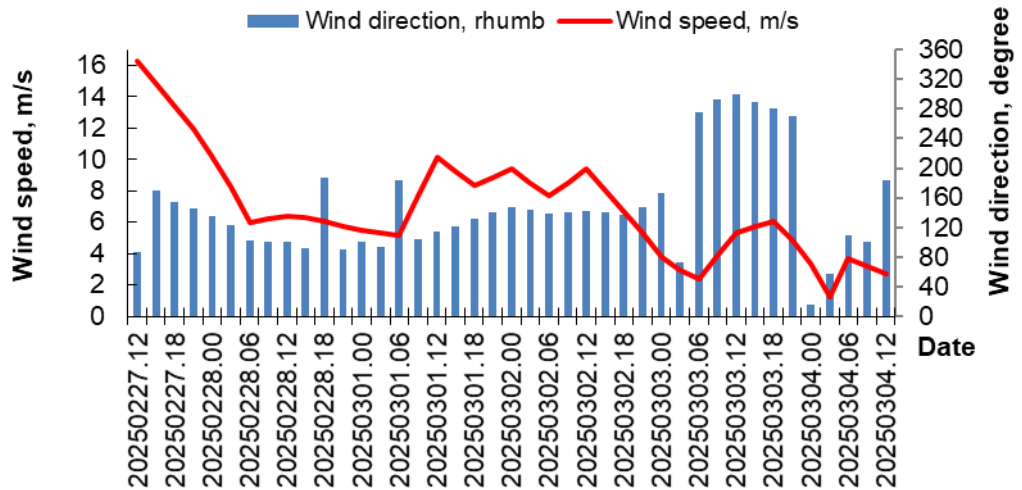


Wave condition in the Fort-Shevchenko

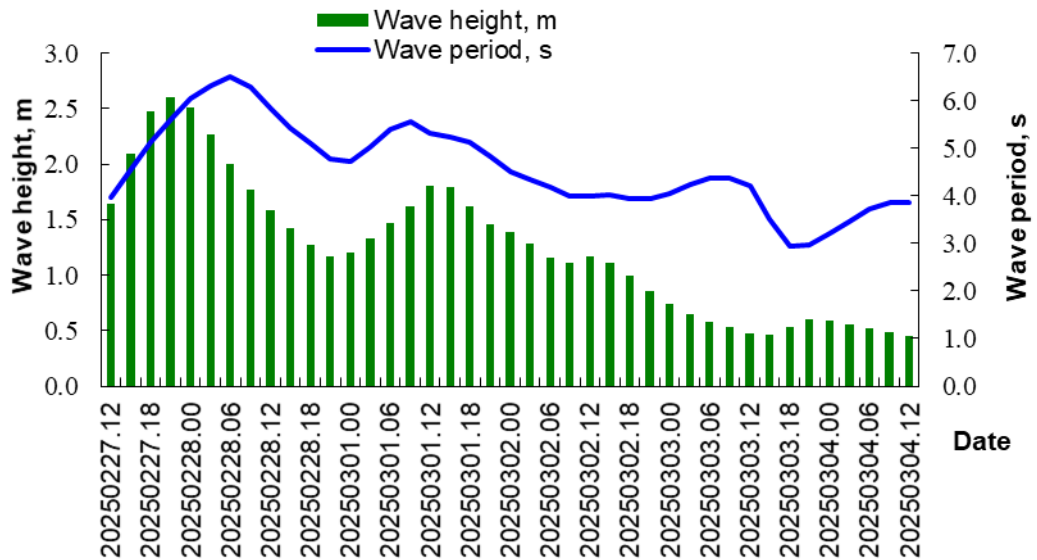


Date time	Fort-Shevchenko				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250227.12	1.32	N	3.6	13	S
20250227.15	1.76	N	4.3	12	SE
20250227.18	2.15	N	4.9	12	SE
20250227.21	2.27	N	5.4	11	SE
20250228.00	2.23	N	5.8	10	SE
20250228.03	2.02	N	5.8	9	SE
20250228.06	1.75	N	5.5	9	SE
20250228.09	1.52	NW	5.1	8	SE
20250228.12	1.36	NW	4.6	8	SE
20250228.15	1.24	NW	4.3	8	SE
20250228.18	1.20	NW	4.2	8	SE
20250228.21	1.29	NW	4.2	10	SE
20250301.00	1.56	NW	4.5	11	SE
20250301.03	1.81	NW	4.8	12	SE
20250301.06	2.04	NW	5.1	12	SE
20250301.09	2.08	NW	5.3	11	SE
20250301.12	1.92	NW	5.2	10	SE
20250301.15	1.68	NW	5.0	9	SE
20250301.18	1.40	NW	4.8	8	SE
20250301.21	1.19	NW	4.5	7	SE
20250302.00	1.05	NW	4.2	7	SE
20250302.03	0.96	NW	3.9	7	SE
20250302.06	0.92	NW	3.8	7	SE
20250302.09	0.92	NW	3.7	8	SE
20250302.12	0.98	NW	3.7	8	SE
20250302.15	0.95	NW	3.8	8	SE
20250302.18	0.89	NW	3.7	7	SE
20250302.21	0.78	NW	3.7	6	SE
20250303.00	0.67	NW	3.8	4	SE
20250303.03	0.57	NW	3.9	3	S
20250303.06	0.48	NW	4.0	1	NE
20250303.09	0.42	NW	3.9	3	W
20250303.12	0.36	NW	3.8	4	NW
20250303.15	0.32	NW	3.5	4	NW
20250303.18	0.30	NW	3.0	4	NW
20250303.21	0.31	W	2.5	3	NW
20250304.00	0.31	SE	2.6	2	N
20250304.03	0.31	SE	2.8	3	NW
20250304.06	0.32	E	3.1	4	S
20250304.09	0.33	E	3.2	3	S
20250304.12	0.34	E	3.2	3	S

Wind condition in the Aktau

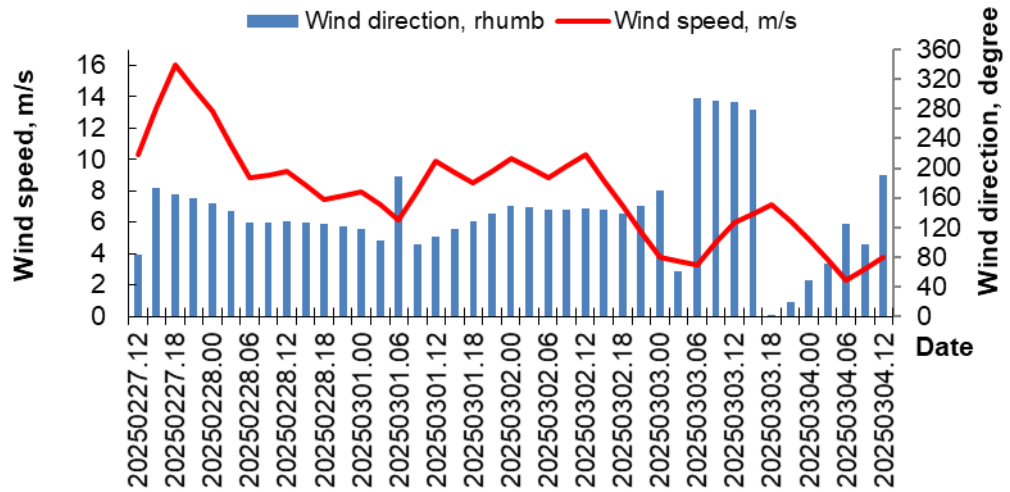


Wave condition in the Aktau

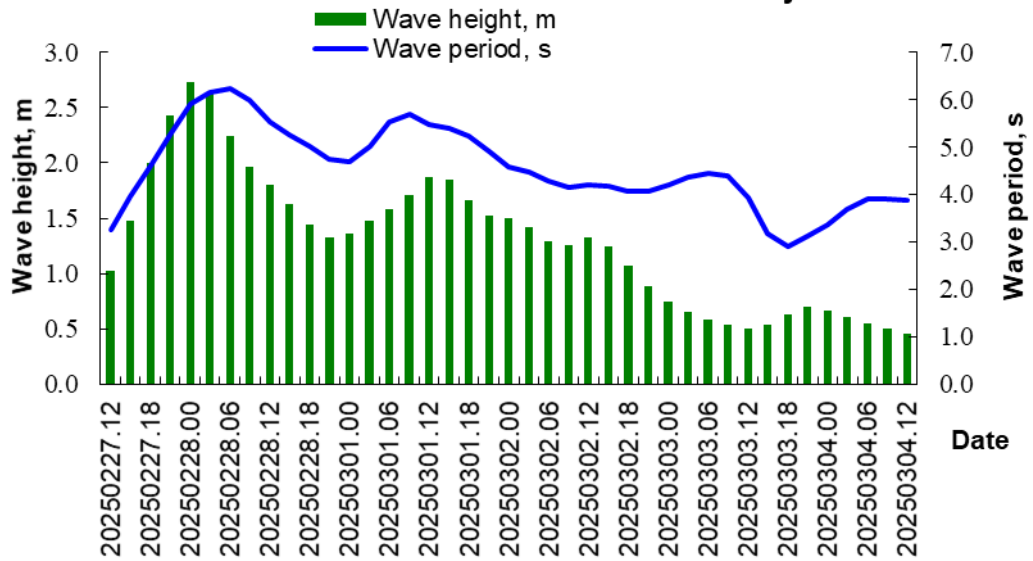


Date time	Aktau				
	Wave height, m	Направление волны, румб	Wave height, m	Скорость ветра, м/с	Wave height, m
20250227.12	1.64	N	4.0	16	E
20250227.15	2.09	N	4.5	15	S
20250227.18	2.48	N	5.1	13	SE
20250227.21	2.61	N	5.6	12	SE
20250228.00	2.51	N	6.0	10	SE
20250228.03	2.27	N	6.3	8	SE
20250228.06	2.01	NW	6.5	6	E
20250228.09	1.77	NW	6.3	6	E
20250228.12	1.58	NW	5.8	6	E
20250228.15	1.42	NW	5.4	6	E
20250228.18	1.28	NW	5.1	6	S
20250228.21	1.17	NW	4.8	6	E
20250301.00	1.20	NW	4.7	5	E
20250301.03	1.34	NW	5.0	5	E
20250301.06	1.47	NW	5.4	5	S
20250301.09	1.62	NW	5.6	8	E
20250301.12	1.81	NW	5.3	10	SE
20250301.15	1.79	NW	5.2	9	SE
20250301.18	1.61	NW	5.1	8	SE
20250301.21	1.46	NW	4.8	9	SE
20250302.00	1.39	NW	4.5	9	SE
20250302.03	1.28	NW	4.3	9	SE
20250302.06	1.15	NW	4.2	8	SE
20250302.09	1.11	NW	4.0	9	SE
20250302.12	1.17	NW	4.0	9	SE
20250302.15	1.12	NW	4.0	8	SE
20250302.18	0.99	NW	4.0	7	SE
20250302.21	0.85	NW	3.9	5	SE
20250303.00	0.74	NW	4.1	4	S
20250303.03	0.65	NW	4.3	3	E
20250303.06	0.58	NW	4.4	2	W
20250303.09	0.53	NW	4.4	4	W
20250303.12	0.48	NW	4.2	5	NW
20250303.15	0.47	NW	3.5	6	W
20250303.18	0.53	N	2.9	6	W
20250303.21	0.60	NE	3.0	5	W
20250304.00	0.59	E	3.2	3	N
20250304.03	0.56	E	3.4	1	NE
20250304.06	0.52	E	3.7	4	E
20250304.09	0.49	E	3.9	3	E
20250304.12	0.45	E	3.9	3	S

Wind condition in the Peschanyi

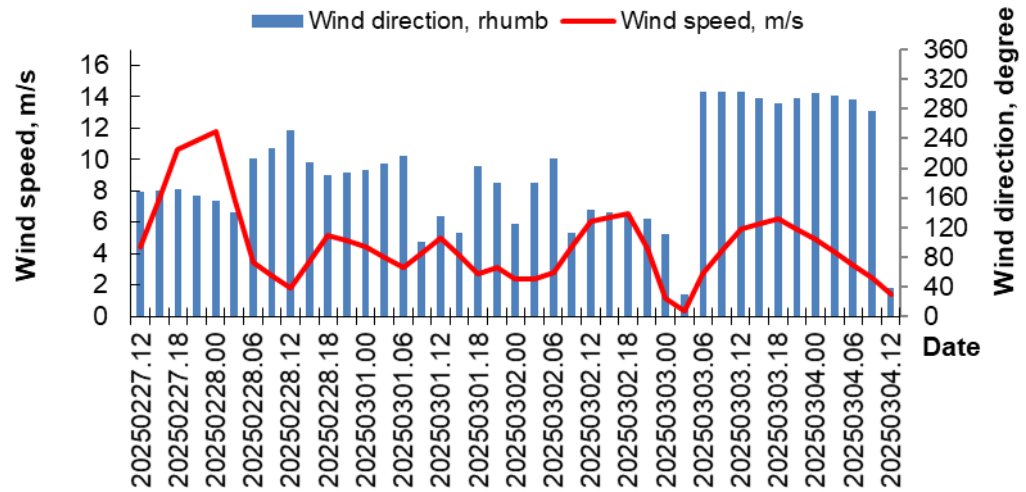


Wave condition in the Peschanyi

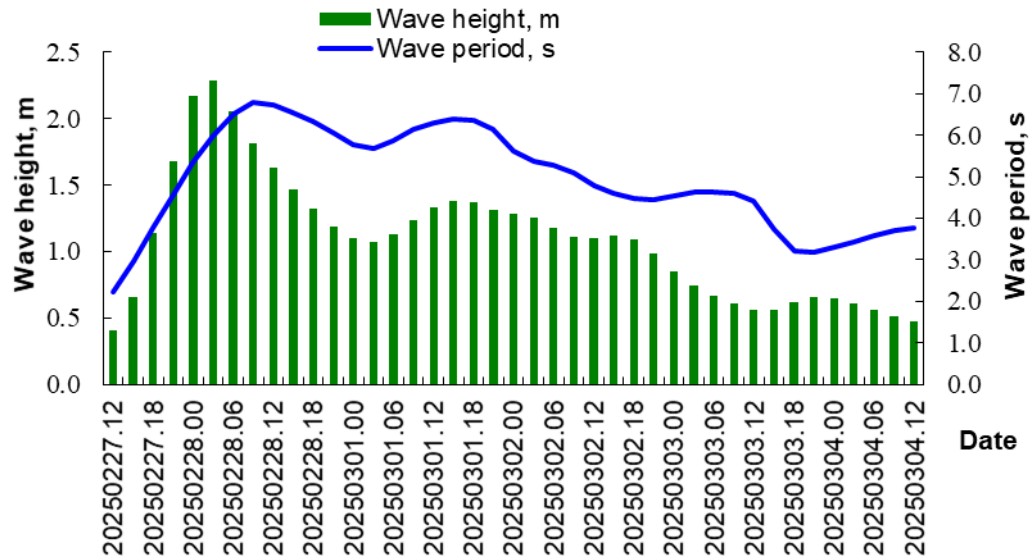


Date time	Peschanyi (Isan)				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250227.12	1.02	N	3.3	10	E
20250227.15	1.47	N	3.9	13	S
20250227.18	1.99	N	4.6	16	S
20250227.21	2.42	N	5.3	15	S
20250228.00	2.73	NW	5.9	13	SE
20250228.03	2.63	NW	6.2	11	SE
20250228.06	2.25	NW	6.2	9	SE
20250228.09	1.96	NW	6.0	9	SE
20250228.12	1.80	NW	5.5	9	SE
20250228.15	1.62	NW	5.3	8	SE
20250228.18	1.45	NW	5.0	7	SE
20250228.21	1.33	NW	4.8	8	SE
20250301.00	1.37	NW	4.7	8	SE
20250301.03	1.48	NW	5.0	7	E
20250301.06	1.58	NW	5.5	6	S
20250301.09	1.70	NW	5.7	8	E
20250301.12	1.87	NW	5.5	10	E
20250301.15	1.85	NW	5.4	9	SE
20250301.18	1.67	NW	5.2	8	SE
20250301.21	1.53	NW	4.9	9	SE
20250302.00	1.50	NW	4.6	10	SE
20250302.03	1.42	NW	4.5	9	SE
20250302.06	1.30	NW	4.3	9	SE
20250302.09	1.26	NW	4.1	10	SE
20250302.12	1.33	NW	4.2	10	SE
20250302.15	1.25	NW	4.2	9	SE
20250302.18	1.07	NW	4.1	7	SE
20250302.21	0.89	NW	4.1	5	SE
20250303.00	0.75	NW	4.2	4	S
20250303.03	0.66	NW	4.4	3	NE
20250303.06	0.59	NW	4.5	3	NW
20250303.09	0.54	NW	4.4	5	W
20250303.12	0.51	NW	3.9	6	W
20250303.15	0.54	NW	3.2	7	W
20250303.18	0.63	NE	2.9	7	N
20250303.21	0.70	NE	3.1	6	N
20250304.00	0.67	NE	3.4	5	NE
20250304.03	0.60	E	3.7	4	E
20250304.06	0.55	E	3.9	2	SE
20250304.09	0.50	E	3.9	3	E
20250304.12	0.46	E	3.9	4	S

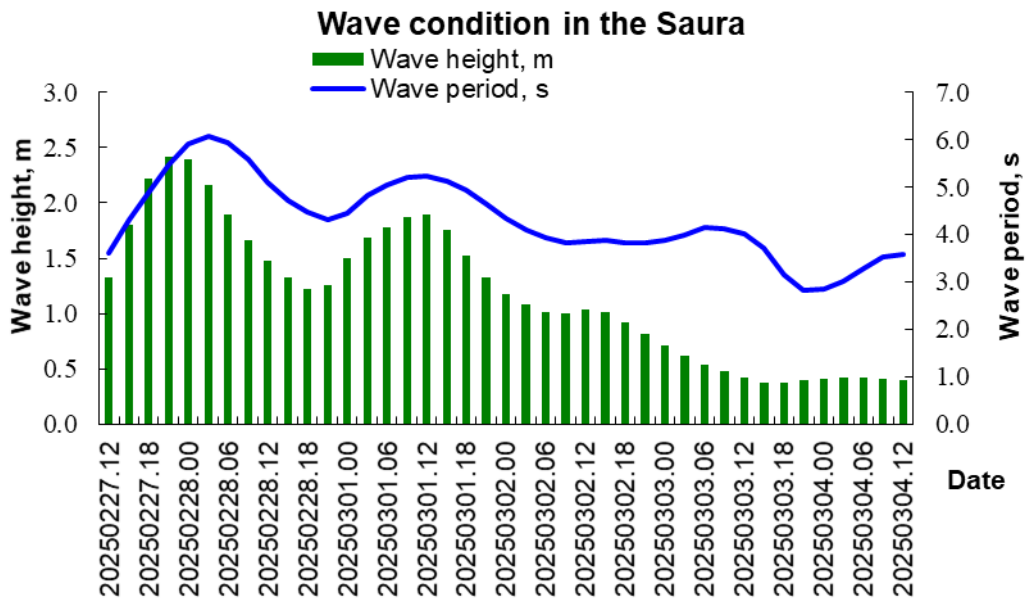
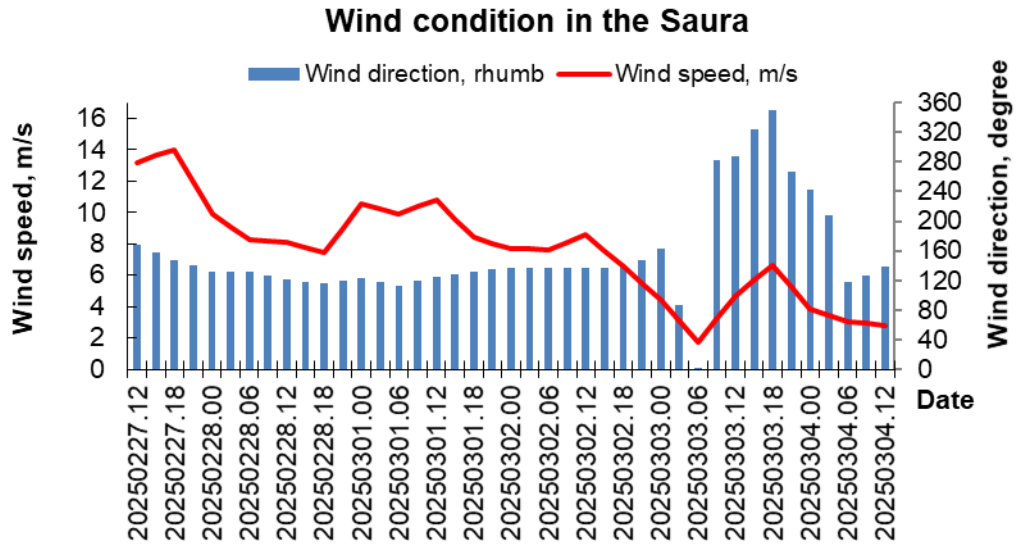
Wind condition in the Fetisovo



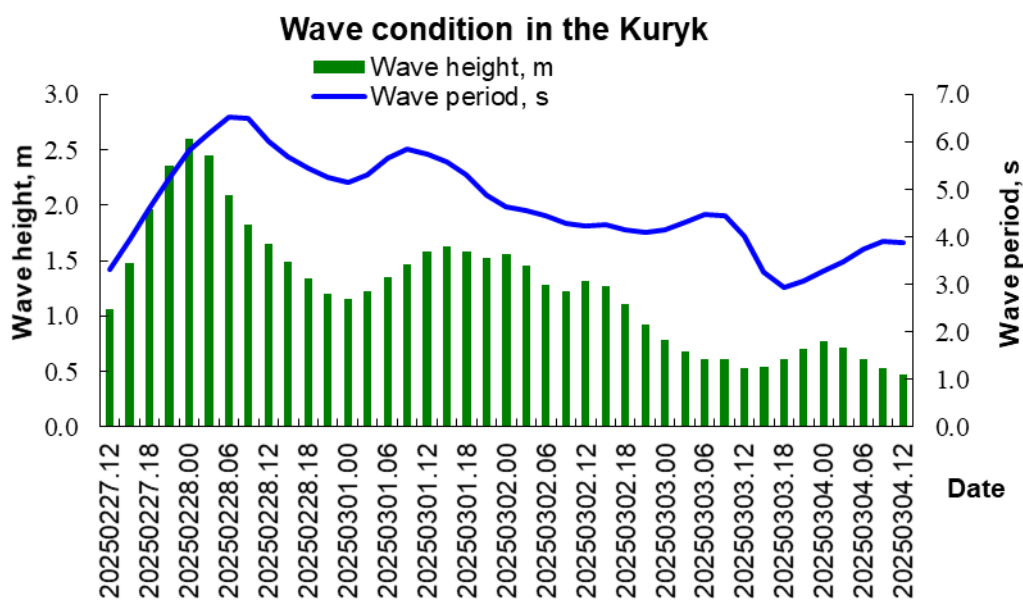
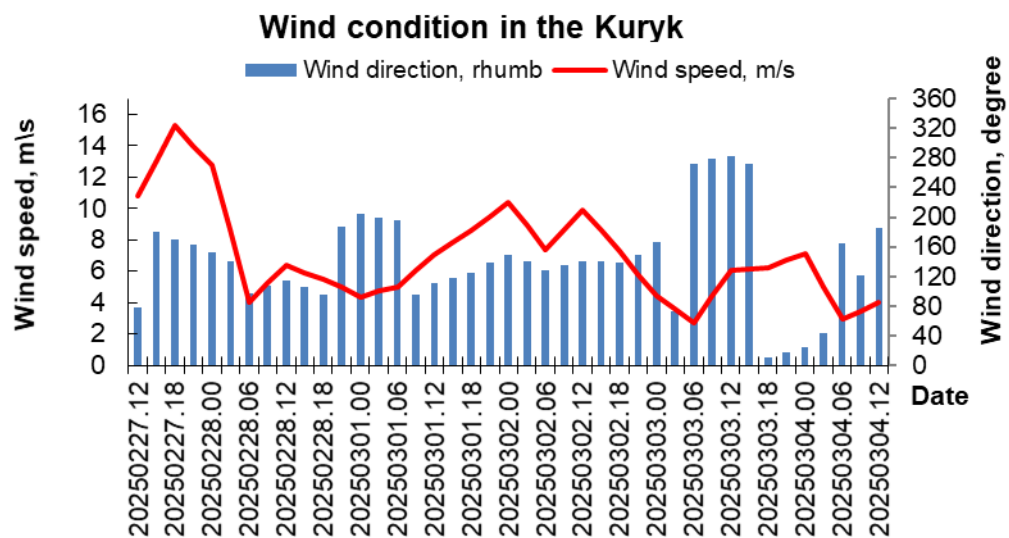
Wave condition in the Fetisovo



Date time	Fetisovo				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250227.12	0.40	N	2.2	4	S
20250227.15	0.65	N	3.0	8	S
20250227.18	1.14	N	3.8	11	S
20250227.21	1.68	NW	4.6	11	S
20250228.00	2.17	NW	5.4	12	SE
20250228.03	2.28	NW	6.0	8	SE
20250228.06	2.05	NW	6.5	3	SW
20250228.09	1.82	NW	6.8	3	SW
20250228.12	1.63	NW	6.7	2	W
20250228.15	1.47	NW	6.5	4	SW
20250228.18	1.32	NW	6.3	5	S
20250228.21	1.19	NW	6.0	5	S
20250301.00	1.10	NW	5.8	4	S
20250301.03	1.07	NW	5.7	4	SW
20250301.06	1.13	NW	5.9	3	SW
20250301.09	1.24	NW	6.1	4	E
20250301.12	1.33	NW	6.3	5	SE
20250301.15	1.38	NW	6.4	4	SE
20250301.18	1.37	NW	6.4	3	SW
20250301.21	1.31	NW	6.2	3	S
20250302.00	1.28	NW	5.6	2	SE
20250302.03	1.26	NW	5.4	2	S
20250302.06	1.18	NW	5.3	3	SW
20250302.09	1.11	NW	5.1	4	E
20250302.12	1.10	NW	4.8	6	SE
20250302.15	1.12	NW	4.6	6	SE
20250302.18	1.09	NW	4.5	7	SE
20250302.21	0.98	NW	4.4	4	SE
20250303.00	0.85	NW	4.5	1	E
20250303.03	0.75	NW	4.6	0	NE
20250303.06	0.67	NW	4.6	3	NW
20250303.09	0.61	NW	4.6	4	NW
20250303.12	0.56	NW	4.4	6	NW
20250303.15	0.56	NW	3.7	6	NW
20250303.18	0.62	N	3.2	6	W
20250303.21	0.66	NE	3.2	6	NW
20250304.00	0.64	NE	3.3	5	NW
20250304.03	0.61	NE	3.4	4	NW
20250304.06	0.56	E	3.6	3	W
20250304.09	0.51	E	3.7	2	W
20250304.12	0.47	E	3.8	1	NE



Date time	Saura				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250227.12	1.32	N	3.6	13	S
20250227.15	1.80	N	4.3	14	S
20250227.18	2.22	N	4.9	14	SE
20250227.21	2.42	N	5.5	12	SE
20250228.00	2.39	N	5.9	10	SE
20250228.03	2.16	N	6.1	9	SE
20250228.06	1.90	N	5.9	8	SE
20250228.09	1.66	N	5.6	8	SE
20250228.12	1.47	NW	5.1	8	SE
20250228.15	1.32	NW	4.7	8	SE
20250228.18	1.22	NW	4.5	7	SE
20250228.21	1.25	NW	4.3	9	SE
20250301.00	1.50	NW	4.5	11	SE
20250301.03	1.69	NW	4.8	10	SE
20250301.06	1.78	NW	5.0	10	SE
20250301.09	1.87	NW	5.2	10	SE
20250301.12	1.90	NW	5.2	11	SE
20250301.15	1.75	NW	5.1	10	SE
20250301.18	1.53	NW	4.9	8	SE
20250301.21	1.32	NW	4.6	8	SE
20250302.00	1.18	NW	4.3	8	SE
20250302.03	1.08	NW	4.1	8	SE
20250302.06	1.02	NW	3.9	8	SE
20250302.09	1.00	NW	3.8	8	SE
20250302.12	1.04	NW	3.9	9	SE
20250302.15	1.01	NW	3.9	8	SE
20250302.18	0.93	NW	3.8	7	SE
20250302.21	0.81	NW	3.8	5	SE
20250303.00	0.71	NW	3.9	4	S
20250303.03	0.62	NW	4.0	3	E
20250303.06	0.54	NW	4.1	2	N
20250303.09	0.48	NW	4.1	3	W
20250303.12	0.42	NW	4.0	5	W
20250303.15	0.38	NW	3.7	6	NW
20250303.18	0.37	NW	3.1	7	N
20250303.21	0.39	N	2.8	5	W
20250304.00	0.41	E	2.8	4	SW
20250304.03	0.42	E	3.0	3	SW
20250304.06	0.42	E	3.3	3	SE
20250304.09	0.41	E	3.5	3	SE
20250304.12	0.40	E	3.6	3	SE



Date time	Kuryk				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250227.12	1.06	N	3.3	11	E
20250227.15	1.48	N	4.0	13	S
20250227.18	1.96	N	4.6	15	S
20250227.21	2.36	N	5.3	14	S
20250228.00	2.60	NW	5.8	13	SE
20250228.03	2.45	NW	6.2	9	SE
20250228.06	2.09	NW	6.5	4	E
20250228.09	1.82	NW	6.5	5	E
20250228.12	1.65	NW	6.0	6	SE
20250228.15	1.50	NW	5.7	6	E
20250228.18	1.34	NW	5.5	6	E
20250228.21	1.21	NW	5.2	5	S
20250301.00	1.16	NW	5.1	4	SW
20250301.03	1.22	NW	5.3	5	S
20250301.06	1.35	NW	5.7	5	S
20250301.09	1.47	NW	5.8	6	E
20250301.12	1.58	NW	5.7	7	E
20250301.15	1.63	NW	5.6	8	SE
20250301.18	1.58	NW	5.3	9	SE
20250301.21	1.53	NW	4.9	9	SE
20250302.00	1.56	NW	4.6	10	SE
20250302.03	1.46	NW	4.5	9	SE
20250302.06	1.29	NW	4.5	7	SE
20250302.09	1.23	NW	4.3	9	SE
20250302.12	1.32	NW	4.2	10	SE
20250302.15	1.28	NW	4.2	9	SE
20250302.18	1.11	NW	4.2	7	SE
20250302.21	0.93	NW	4.1	6	SE
20250303.00	0.79	NW	4.2	4	S
20250303.03	0.69	NW	4.3	4	E
20250303.06	0.61	NW	4.5	3	W
20250303.09	0.61	NW	4.4	4	W
20250303.12	0.53	NW	4.0	6	W
20250303.15	0.54	NW	3.3	6	W
20250303.18	0.61	NE	2.9	6	N
20250303.21	0.70	NE	3.1	7	N
20250304.00	0.78	E	3.3	7	NE
20250304.03	0.72	E	3.5	5	NE
20250304.06	0.61	E	3.7	3	S
20250304.09	0.53	E	3.9	3	SE
20250304.12	0.48	E	3.9	4	S

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

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Checked by: Yeltay A.G.

RSE «Kazhydromet» – Caspian Sea Hydrometeorological Research Department

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