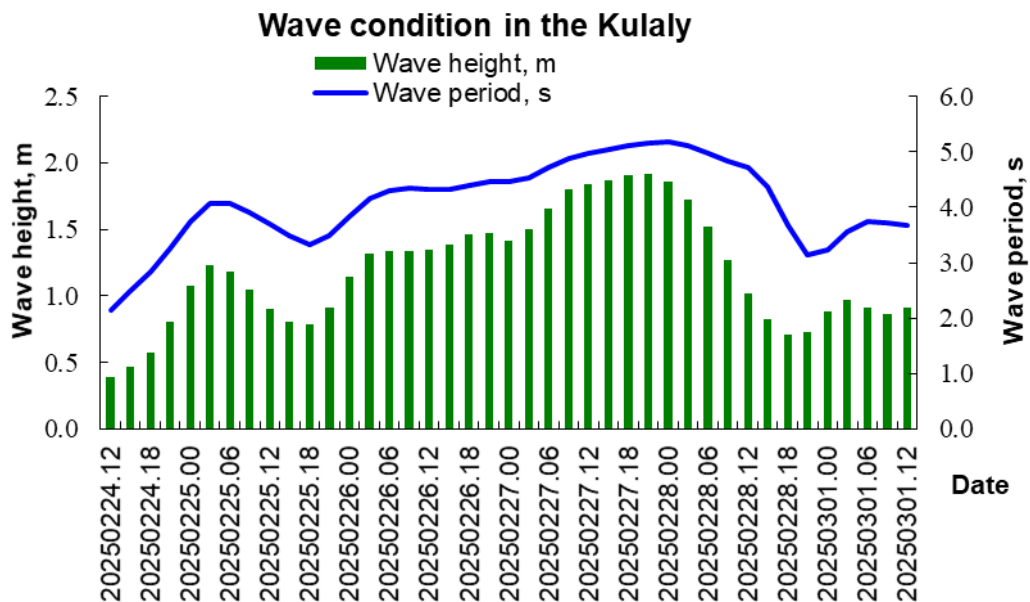
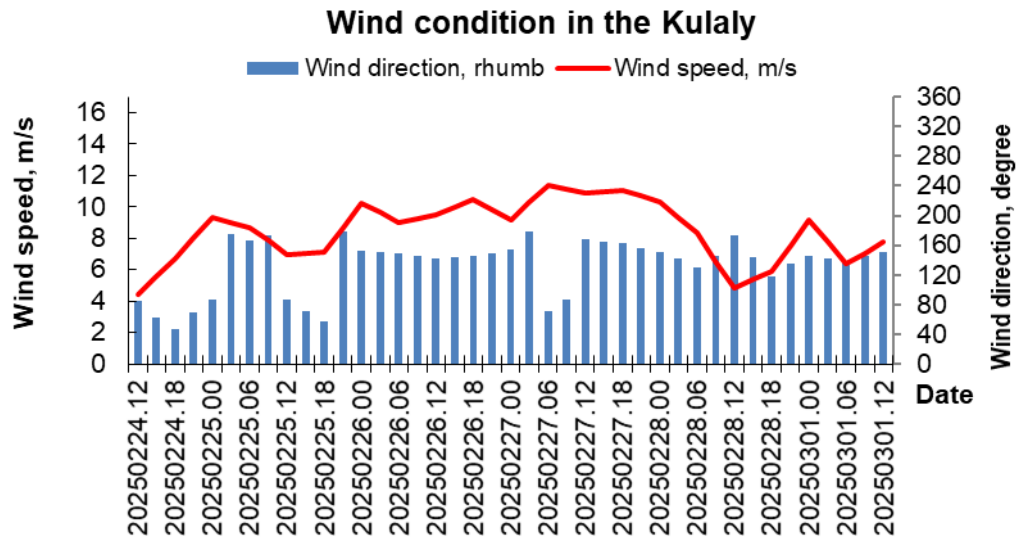




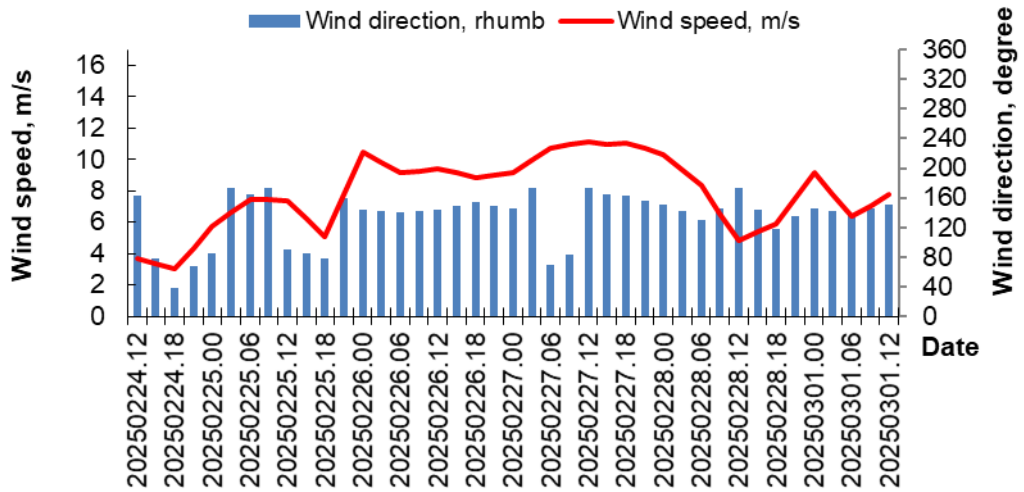
**MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»**

**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 24 – March 01, 2025.**

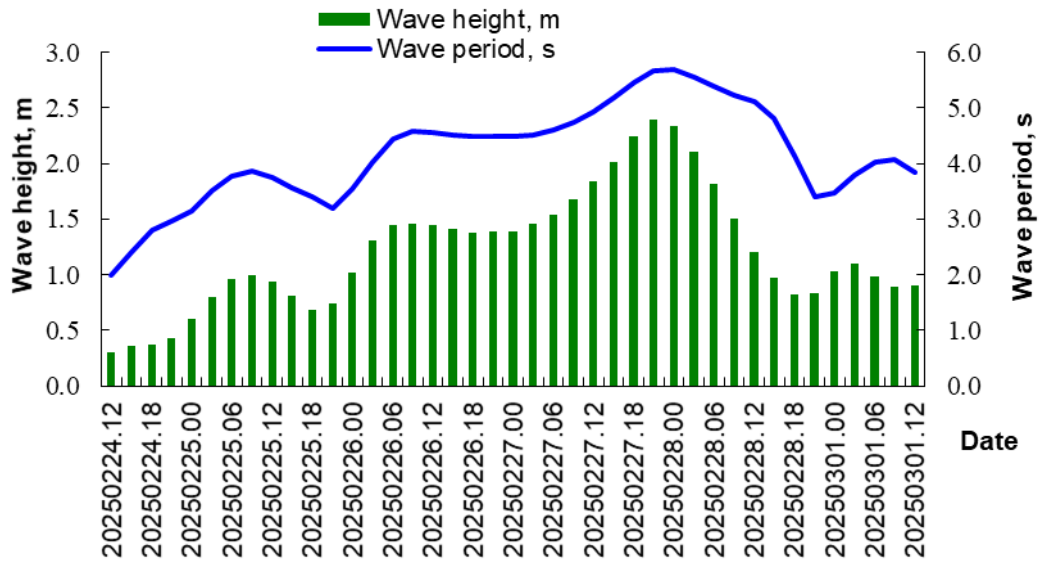


Date time	Kulaly				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250224.12	0.39	N	2.1	4	E
20250224.15	0.47	N	2.5	6	NE
20250224.18	0.58	N	2.8	7	NE
20250224.21	0.81	N	3.3	8	E
20250225.00	1.08	N	3.7	9	E
20250225.03	1.23	N	4.1	9	S
20250225.06	1.18	N	4.1	9	S
20250225.09	1.04	N	3.9	8	S
20250225.12	0.90	N	3.7	7	E
20250225.15	0.81	N	3.5	7	E
20250225.18	0.78	N	3.3	7	NE
20250225.21	0.92	N	3.5	9	S
20250226.00	1.14	N	3.8	10	SE
20250226.03	1.32	N	4.2	10	SE
20250226.06	1.34	N	4.3	9	SE
20250226.09	1.33	N	4.4	9	SE
20250226.12	1.35	N	4.3	9	SE
20250226.15	1.39	NW	4.3	10	SE
20250226.18	1.47	NW	4.4	10	SE
20250226.21	1.47	NW	4.5	10	SE
20250227.00	1.42	NW	4.5	9	SE
20250227.03	1.50	N	4.5	10	S
20250227.06	1.65	N	4.7	11	E
20250227.09	1.80	N	4.9	11	E
20250227.12	1.84	N	5.0	11	S
20250227.15	1.87	N	5.0	11	S
20250227.18	1.91	N	5.1	11	S
20250227.21	1.92	N	5.2	11	SE
20250228.00	1.86	N	5.2	10	SE
20250228.03	1.72	N	5.1	9	SE
20250228.06	1.52	N	5.0	8	SE
20250228.09	1.27	N	4.8	7	SE
20250228.12	1.02	N	4.7	5	S
20250228.15	0.82	N	4.4	5	SE
20250228.18	0.71	N	3.7	6	SE
20250228.21	0.73	NW	3.1	8	SE
20250301.00	0.88	NW	3.2	9	SE
20250301.03	0.97	NW	3.6	8	SE
20250301.06	0.91	NW	3.8	6	SE
20250301.09	0.87	NW	3.7	7	SE
20250301.12	0.91	NW	3.7	8	SE

Wind condition in the Fort-Shevchenko

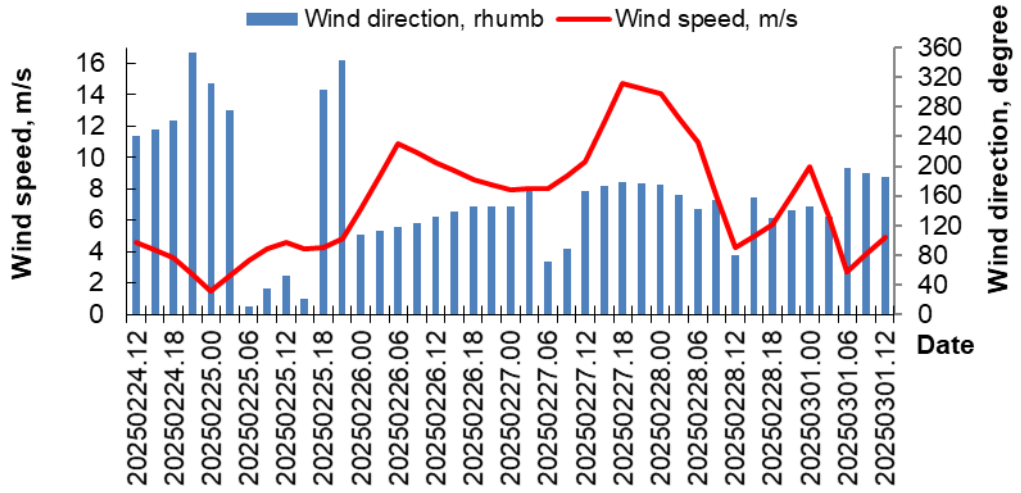


Wave condition in the Fort-Shevchenko

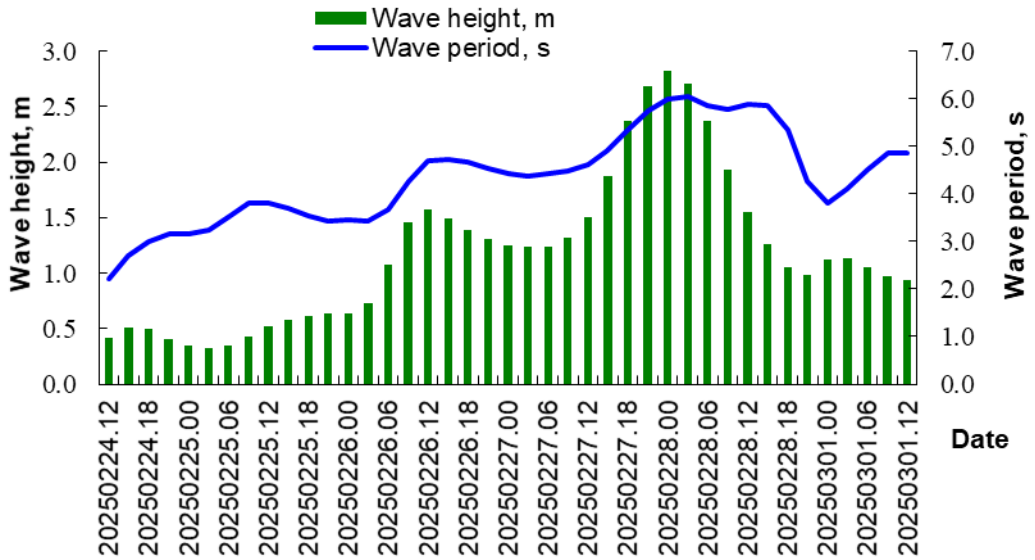


Date time	Fort-Shevchenko				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250224.12	0.30	N	2.0	4	S
20250224.15	0.36	N	2.4	3	E
20250224.18	0.37	N	2.8	3	NE
20250224.21	0.43	N	3.0	4	E
20250225.00	0.60	N	3.2	6	E
20250225.03	0.80	N	3.5	7	S
20250225.06	0.96	N	3.8	7	S
20250225.09	1.00	N	3.9	7	S
20250225.12	0.93	N	3.8	7	E
20250225.15	0.81	N	3.6	6	E
20250225.18	0.68	N	3.4	5	E
20250225.21	0.74	N	3.2	8	S
20250226.00	1.02	N	3.5	10	SE
20250226.03	1.31	NW	4.0	10	SE
20250226.06	1.45	NW	4.5	9	SE
20250226.09	1.46	NW	4.6	9	SE
20250226.12	1.44	NW	4.6	9	SE
20250226.15	1.41	NW	4.5	9	SE
20250226.18	1.38	NW	4.5	9	SE
20250226.21	1.39	NW	4.5	9	SE
20250227.00	1.39	NW	4.5	9	SE
20250227.03	1.45	NW	4.5	10	S
20250227.06	1.53	N	4.6	11	E
20250227.09	1.68	N	4.7	11	E
20250227.12	1.84	N	4.9	11	S
20250227.15	2.02	N	5.2	11	S
20250227.18	2.25	N	5.5	11	S
20250227.21	2.40	N	5.7	11	SE
20250228.00	2.34	N	5.7	10	SE
20250228.03	2.11	N	5.6	9	SE
20250228.06	1.82	N	5.4	8	SE
20250228.09	1.50	N	5.2	7	SE
20250228.12	1.20	N	5.1	5	S
20250228.15	0.97	N	4.8	5	SE
20250228.18	0.82	N	4.1	6	SE
20250228.21	0.83	NW	3.4	8	SE
20250301.00	1.03	NW	3.5	9	SE
20250301.03	1.10	NW	3.8	8	SE
20250301.06	0.98	NW	4.0	6	SE
20250301.09	0.89	NW	4.1	7	SE
20250301.12	0.90	NW	3.8	8	SE

Wind condition in the Aktau

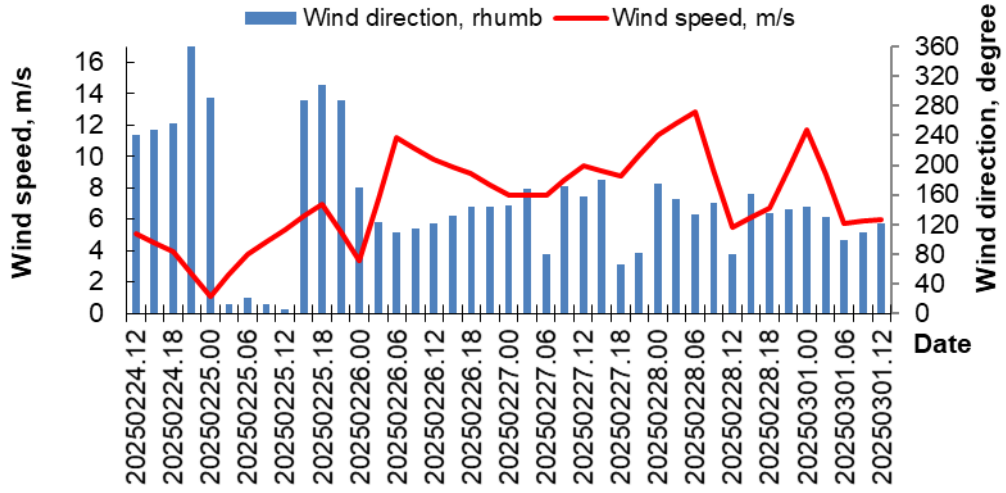


Wave condition in the Aktau

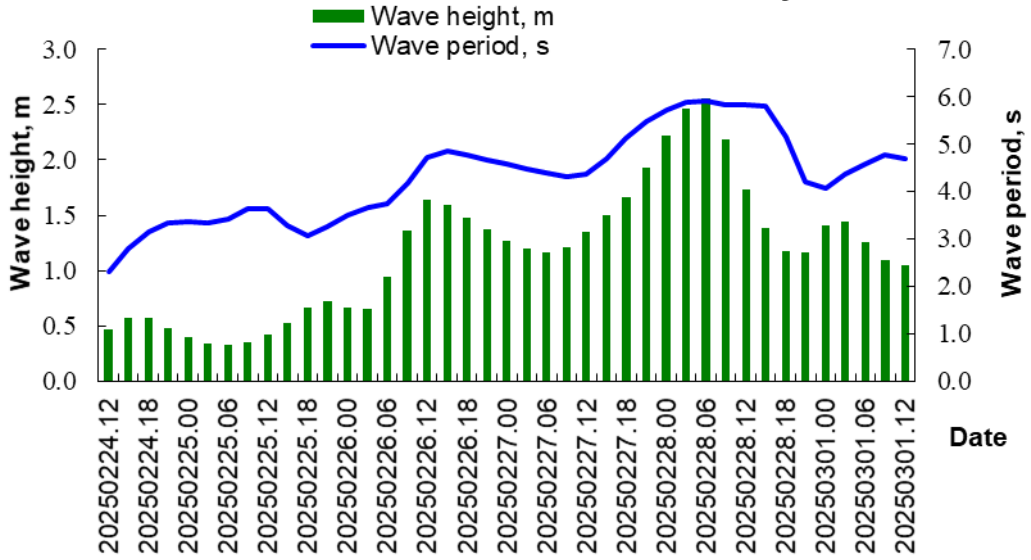


Date time	Aktau				
	Wave height, m	Направление волны, румб	Wave height, m	Скорость ветра, м/с	Wave height, m
20250224.12	0.42	SW	2.2	5	SW
20250224.15	0.51	SW	2.7	4	W
20250224.18	0.49	SW	3.0	4	W
20250224.21	0.41	SW	3.2	3	N
20250225.00	0.35	SW	3.2	1	NW
20250225.03	0.32	W	3.2	2	W
20250225.06	0.35	NW	3.5	3	N
20250225.09	0.42	NW	3.8	4	NE
20250225.12	0.52	NW	3.8	5	NE
20250225.15	0.58	NW	3.7	4	N
20250225.18	0.61	NW	3.5	4	NW
20250225.21	0.64	N	3.4	5	N
20250226.00	0.63	N	3.5	7	E
20250226.03	0.73	NW	3.4	9	SE
20250226.06	1.08	NW	3.7	11	SE
20250226.09	1.46	NW	4.3	10	SE
20250226.12	1.58	NW	4.7	10	SE
20250226.15	1.49	NW	4.7	9	SE
20250226.18	1.39	NW	4.7	9	SE
20250226.21	1.31	NW	4.5	8	SE
20250227.00	1.25	NW	4.4	8	SE
20250227.03	1.23	NW	4.4	8	S
20250227.06	1.23	NW	4.4	8	E
20250227.09	1.32	N	4.5	9	E
20250227.12	1.50	NW	4.6	10	S
20250227.15	1.87	NW	4.9	12	S
20250227.18	2.37	NW	5.4	15	S
20250227.21	2.69	NW	5.8	14	S
20250228.00	2.82	N	6.0	14	S
20250228.03	2.71	NW	6.0	13	S
20250228.06	2.37	NW	5.9	11	SE
20250228.09	1.94	NW	5.8	8	SE
20250228.12	1.55	NW	5.9	4	E
20250228.15	1.26	NW	5.9	5	SE
20250228.18	1.06	NW	5.3	6	SE
20250228.21	0.98	NW	4.3	8	SE
20250301.00	1.12	NW	3.8	9	SE
20250301.03	1.14	NW	4.1	6	SE
20250301.06	1.05	NW	4.5	3	S
20250301.09	0.97	NW	4.9	4	S
20250301.12	0.94	NW	4.9	5	S

Wind condition in the Peschanyi

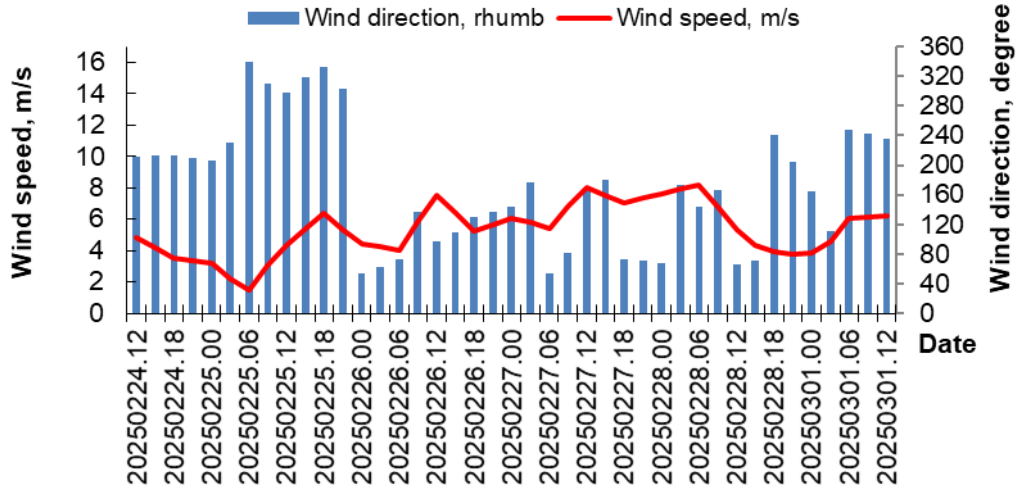


Wave condition in the Peschanyi

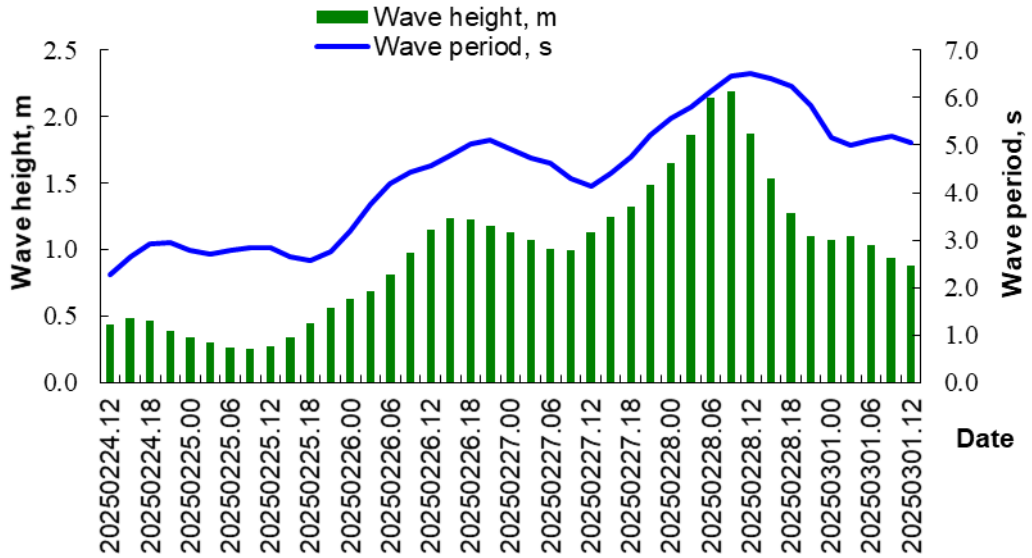


Date time	Peschanyi (Isan)				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250224.12	0.47	SW	2.3	5	SW
20250224.15	0.58	SW	2.8	5	SW
20250224.18	0.57	SW	3.2	4	W
20250224.21	0.48	SW	3.3	3	N
20250225.00	0.40	SW	3.4	1	W
20250225.03	0.35	SW	3.3	2	N
20250225.06	0.33	W	3.4	4	N
20250225.09	0.35	W	3.6	5	N
20250225.12	0.42	NW	3.6	5	N
20250225.15	0.53	NW	3.3	6	W
20250225.18	0.67	NE	3.1	7	NW
20250225.21	0.73	E	3.3	5	W
20250226.00	0.67	E	3.5	3	S
20250226.03	0.66	N	3.7	7	SE
20250226.06	0.95	NW	3.8	11	E
20250226.09	1.37	NW	4.2	11	SE
20250226.12	1.63	NW	4.7	10	SE
20250226.15	1.59	NW	4.9	9	SE
20250226.18	1.48	NW	4.8	9	SE
20250226.21	1.37	NW	4.7	8	SE
20250227.00	1.26	NW	4.6	8	SE
20250227.03	1.20	NW	4.5	8	S
20250227.06	1.16	NW	4.4	8	E
20250227.09	1.21	NW	4.3	8	S
20250227.12	1.35	NW	4.4	9	S
20250227.15	1.50	NW	4.7	9	S
20250227.18	1.67	NW	5.1	9	NE
20250227.21	1.92	NW	5.5	10	E
20250228.00	2.22	NW	5.7	11	S
20250228.03	2.46	NW	5.9	12	SE
20250228.06	2.55	NW	5.9	13	SE
20250228.09	2.19	NW	5.8	9	SE
20250228.12	1.73	NW	5.8	6	E
20250228.15	1.38	NW	5.8	6	S
20250228.18	1.17	NW	5.1	7	SE
20250228.21	1.17	NW	4.2	9	SE
20250301.00	1.41	NW	4.1	12	SE
20250301.03	1.44	NW	4.4	9	SE
20250301.06	1.25	NW	4.6	6	E
20250301.09	1.10	NW	4.8	6	E
20250301.12	1.04	NW	4.7	6	SE

Wind condition in the Fetisovo

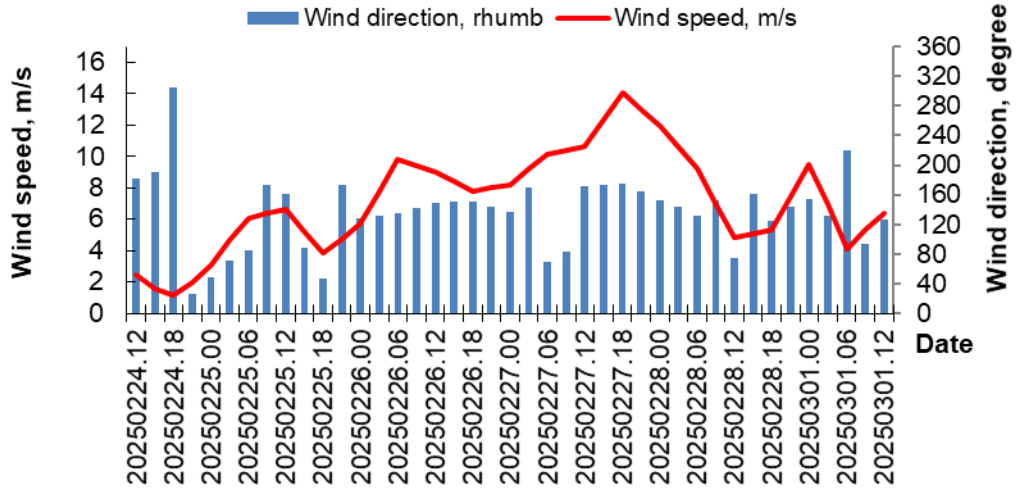


Wave condition in the Fetisovo

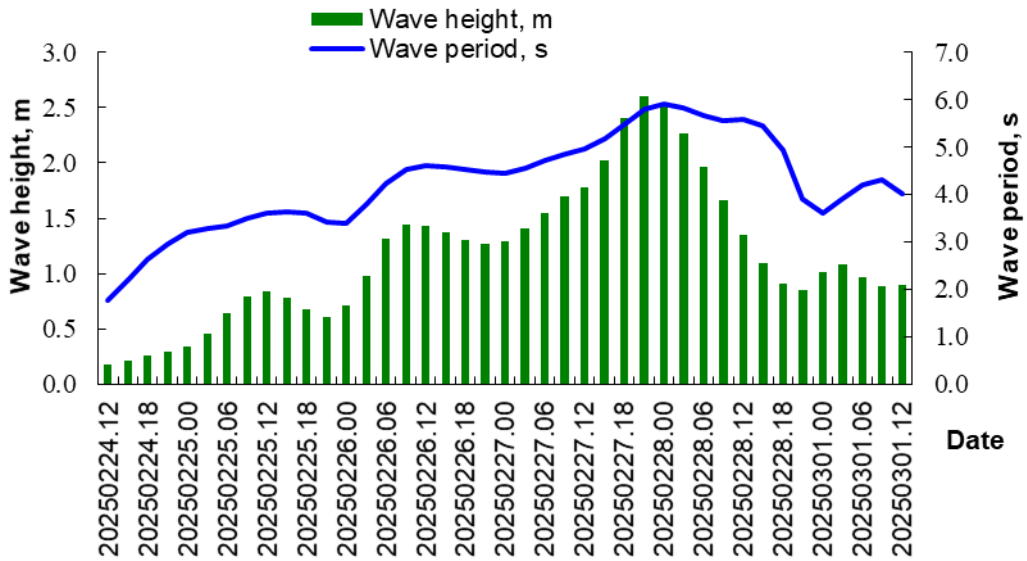


Date time	Fetisovo				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250224.12	0.44	SW	2.3	5	SW
20250224.15	0.49	SW	2.6	4	SW
20250224.18	0.46	SW	2.9	4	SW
20250224.21	0.39	SW	3.0	3	SW
20250225.00	0.34	SW	2.8	3	SW
20250225.03	0.30	SW	2.7	2	SW
20250225.06	0.26	SW	2.8	1	N
20250225.09	0.25	W	2.8	3	NW
20250225.12	0.27	W	2.8	4	NW
20250225.15	0.34	W	2.7	5	NW
20250225.18	0.45	NW	2.6	6	NW
20250225.21	0.56	NE	2.8	5	NW
20250226.00	0.63	NE	3.2	4	NE
20250226.03	0.69	NE	3.8	4	NE
20250226.06	0.81	NE	4.2	4	E
20250226.09	0.97	NE	4.4	6	SE
20250226.12	1.15	NE	4.6	7	E
20250226.15	1.24	N	4.8	6	E
20250226.18	1.23	N	5.0	5	SE
20250226.21	1.18	NW	5.1	6	SE
20250227.00	1.13	NW	4.9	6	SE
20250227.03	1.07	NW	4.7	6	S
20250227.06	1.00	NW	4.6	5	NE
20250227.09	1.00	N	4.3	7	E
20250227.12	1.13	N	4.1	8	S
20250227.15	1.24	NW	4.4	8	S
20250227.18	1.33	NW	4.8	7	E
20250227.21	1.48	NW	5.2	7	E
20250228.00	1.65	NW	5.6	8	E
20250228.03	1.86	NW	5.8	8	S
20250228.06	2.14	NW	6.1	8	SE
20250228.09	2.19	NW	6.4	7	S
20250228.12	1.87	NW	6.5	5	NE
20250228.15	1.53	NW	6.4	4	E
20250228.18	1.27	NW	6.2	4	SW
20250228.21	1.10	NW	5.8	4	SW
20250301.00	1.08	NW	5.2	4	S
20250301.03	1.10	NW	5.0	5	E
20250301.06	1.03	NW	5.1	6	W
20250301.09	0.94	NW	5.2	6	SW
20250301.12	0.88	NW	5.1	6	SW

Wind condition in the Saura

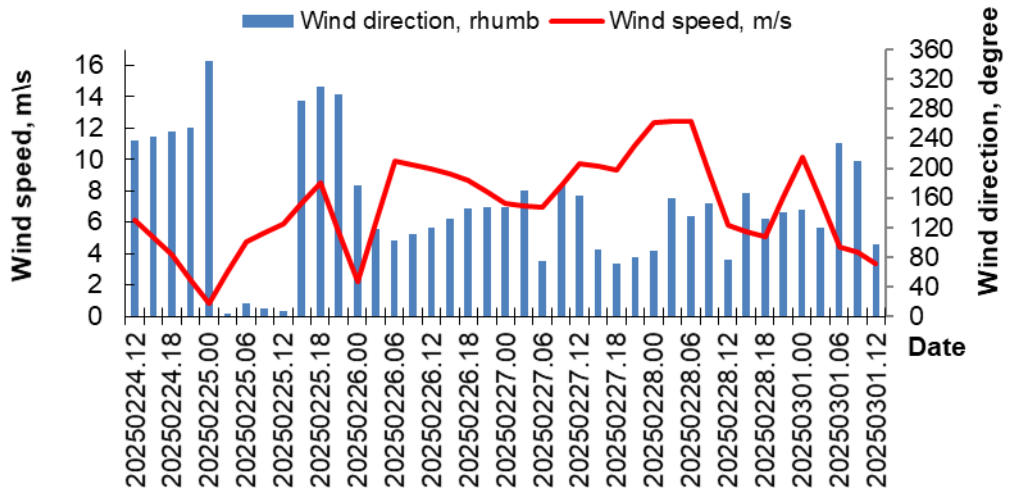


Wave condition in the Saura

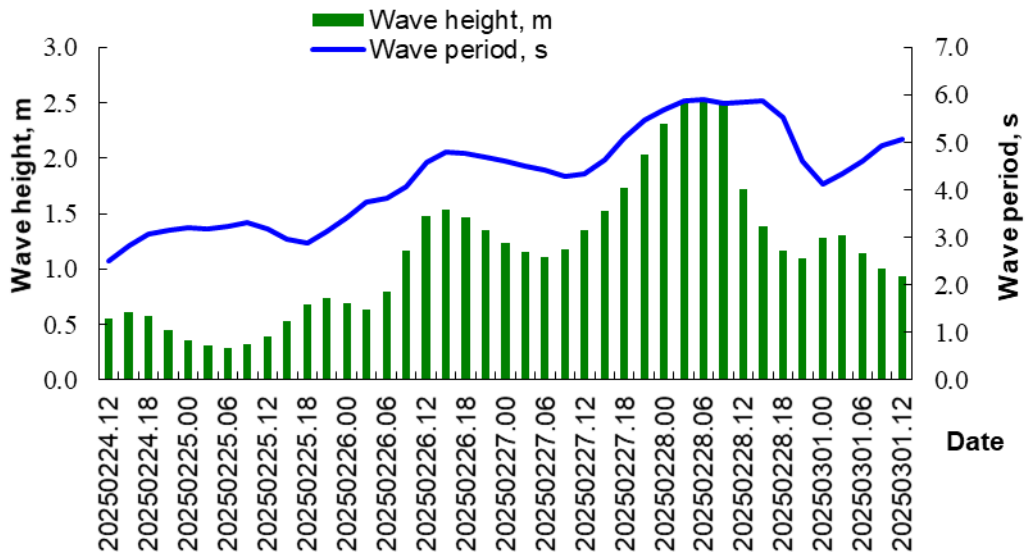


Date time	Saura				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250224.12	0.18	W	1.8	2	S
20250224.15	0.22	W	2.2	2	S
20250224.18	0.26	NW	2.6	1	NW
20250224.21	0.30	NW	3.0	2	NE
20250225.00	0.35	NW	3.2	3	NE
20250225.03	0.46	NW	3.3	5	E
20250225.06	0.64	NW	3.3	6	E
20250225.09	0.79	NW	3.5	6	S
20250225.12	0.84	NW	3.6	7	S
20250225.15	0.78	NW	3.6	5	E
20250225.18	0.68	NW	3.6	4	NE
20250225.21	0.61	N	3.4	5	S
20250226.00	0.72	NW	3.4	6	SE
20250226.03	0.98	NW	3.8	8	SE
20250226.06	1.31	NW	4.2	10	SE
20250226.09	1.45	NW	4.5	9	SE
20250226.12	1.44	NW	4.6	9	SE
20250226.15	1.38	NW	4.6	8	SE
20250226.18	1.30	NW	4.5	8	SE
20250226.21	1.26	NW	4.5	8	SE
20250227.00	1.29	NW	4.5	8	SE
20250227.03	1.41	NW	4.5	9	S
20250227.06	1.55	N	4.7	10	E
20250227.09	1.70	N	4.9	10	E
20250227.12	1.78	N	5.0	11	S
20250227.15	2.03	N	5.2	12	S
20250227.18	2.41	N	5.5	14	S
20250227.21	2.60	N	5.8	13	S
20250228.00	2.51	N	5.9	12	SE
20250228.03	2.26	N	5.8	11	SE
20250228.06	1.97	N	5.7	9	SE
20250228.09	1.66	N	5.5	7	SE
20250228.12	1.35	N	5.6	5	E
20250228.15	1.10	N	5.4	5	S
20250228.18	0.91	N	4.9	5	SE
20250228.21	0.85	NW	3.9	7	SE
20250301.00	1.02	NW	3.6	10	SE
20250301.03	1.09	NW	3.9	7	SE
20250301.06	0.97	NW	4.2	4	SW
20250301.09	0.89	NW	4.3	5	E
20250301.12	0.90	NW	4.0	6	SE

Wind condition in the Kuryk



Wave condition in the Kuryk



Date time	Kuryk				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250224.12	0.56	SW	2.5	6	SW
20250224.15	0.62	SW	2.8	5	SW
20250224.18	0.58	SW	3.1	4	W
20250224.21	0.45	SW	3.1	2	W
20250225.00	0.35	SW	3.2	1	N
20250225.03	0.31	SW	3.2	3	N
20250225.06	0.29	W	3.2	5	N
20250225.09	0.32	W	3.3	5	N
20250225.12	0.40	NW	3.2	6	N
20250225.15	0.53	NW	3.0	7	W
20250225.18	0.68	NE	2.9	9	NW
20250225.21	0.74	E	3.1	5	NW
20250226.00	0.70	E	3.4	2	S
20250226.03	0.64	NE	3.8	6	SE
20250226.06	0.80	NW	3.8	10	E
20250226.09	1.17	NW	4.1	10	E
20250226.12	1.48	NW	4.6	9	SE
20250226.15	1.54	NW	4.8	9	SE
20250226.18	1.47	NW	4.8	9	SE
20250226.21	1.35	NW	4.7	8	SE
20250227.00	1.24	NW	4.6	7	SE
20250227.03	1.16	NW	4.5	7	S
20250227.06	1.11	NW	4.4	7	E
20250227.09	1.17	NW	4.3	8	S
20250227.12	1.36	NW	4.3	10	S
20250227.15	1.53	NW	4.6	10	E
20250227.18	1.73	NW	5.1	9	E
20250227.21	2.04	NW	5.5	11	E
20250228.00	2.31	NW	5.7	12	E
20250228.03	2.51	NW	5.9	12	S
20250228.06	2.53	NW	5.9	12	SE
20250228.09	2.53	NW	5.8	9	SE
20250228.12	1.72	NW	5.9	6	E
20250228.15	1.39	NW	5.9	5	S
20250228.18	1.17	NW	5.5	5	SE
20250228.21	1.09	NW	4.6	8	SE
20250301.00	1.28	NW	4.1	10	SE
20250301.03	1.30	NW	4.3	7	SE
20250301.06	1.14	NW	4.6	4	SW
20250301.09	1.01	NW	4.9	4	SW
20250301.12	0.94	NW	5.1	3	E

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

Compiled by: Bazarbay L.B.

Checked by: Yeltay A.G.

RSE «Kazhydromet» – Caspian Sea Hydrometeorological Research Department

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