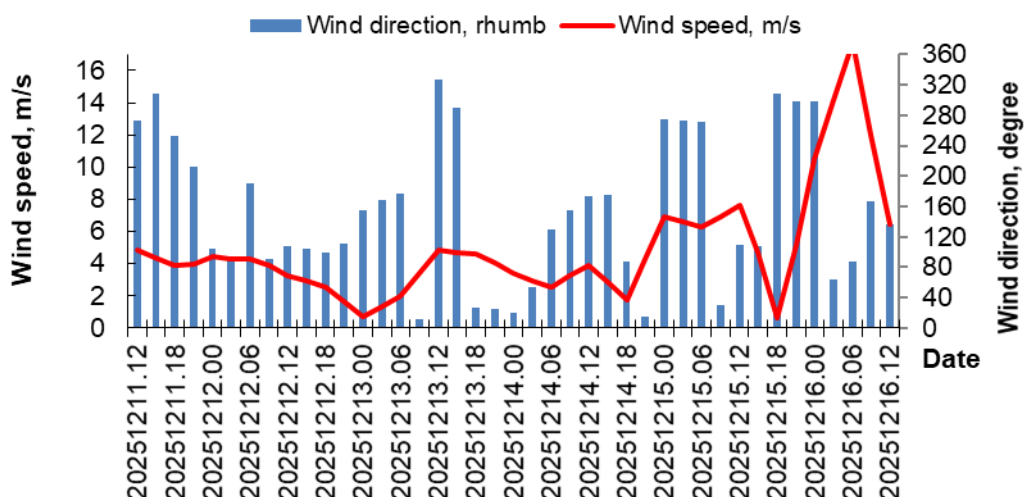




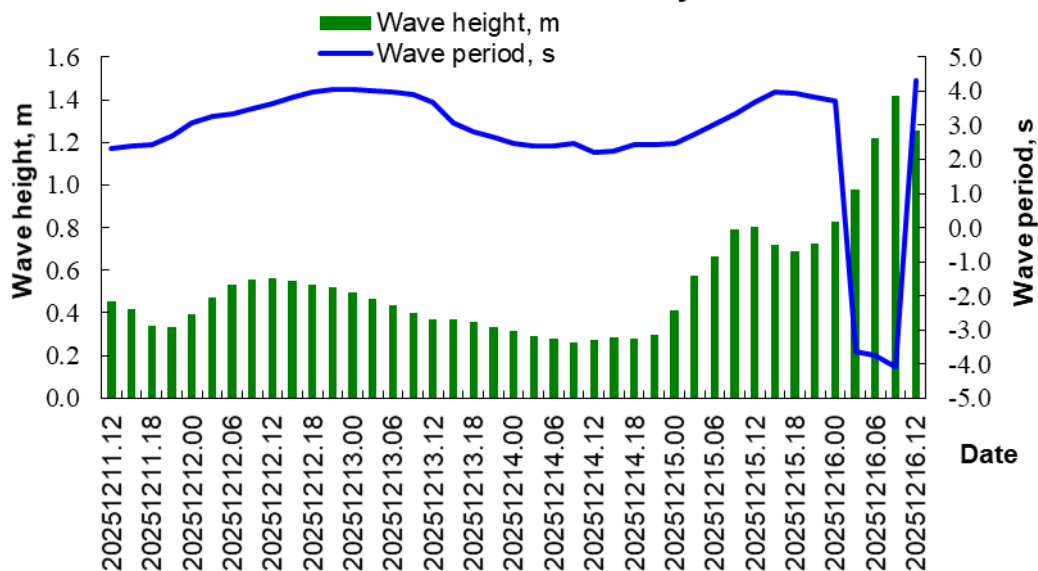
**MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»**

**Wave and wind forecast for the Kazakhstan part of the Caspian Sea with a 5-day advance
using SWAN spectral model for the perio December 11 – 16, 2025.**

Wind condition in the Kulaly

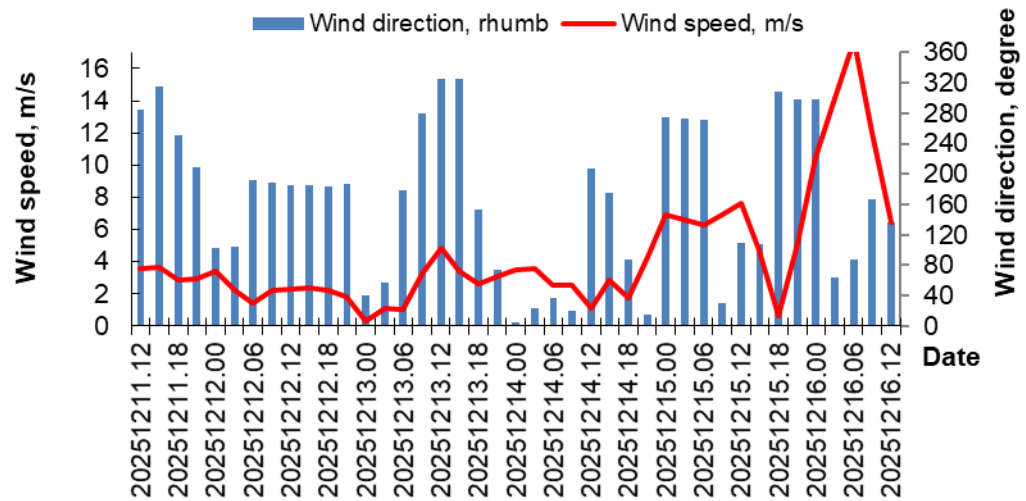


Wave condition in the Kulaly

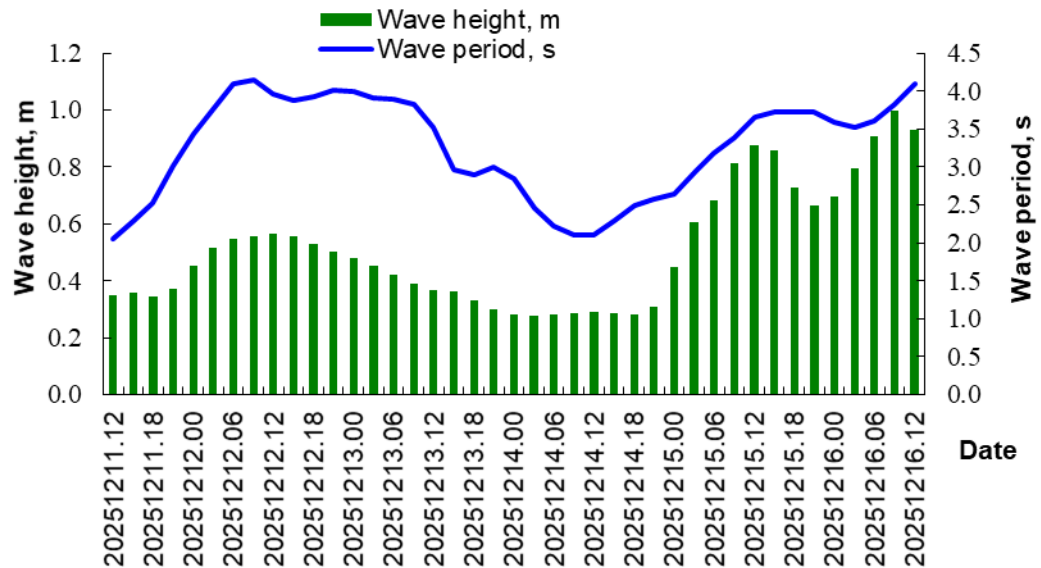


Date time	Kulaly				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20251211.12	0.45	E	2.3	5	W
20251211.15	0.42	E	2.4	4	NW
20251211.18	0.34	E	2.4	4	W
20251211.21	0.33	SE	2.7	4	SW
20251212.00	0.39	E	3.1	4	E
20251212.03	0.47	E	3.3	4	E
20251212.06	0.54	E	3.4	4	S
20251212.09	0.56	E	3.5	4	E
20251212.12	0.56	E	3.6	3	E
20251212.15	0.55	SE	3.8	3	E
20251212.18	0.53	SE	4.0	3	E
20251212.21	0.52	SE	4.1	2	E
20251213.00	0.50	SE	4.1	1	SE
20251213.03	0.47	SE	4.0	1	S
20251213.06	0.43	SE	4.0	2	S
20251213.09	0.40	S	3.9	3	N
20251213.12	0.37	S	3.7	5	NW
20251213.15	0.37	S	3.1	5	W
20251213.18	0.36	SE	2.8	5	NE
20251213.21	0.33	SE	2.7	4	NE
20251214.00	0.31	SE	2.5	3	N
20251214.03	0.29	SE	2.4	3	NE
20251214.06	0.28	SE	2.4	3	SE
20251214.09	0.26	SE	2.5	3	SE
20251214.12	0.27	E	2.2	4	S
20251214.15	0.28	E	2.2	3	S
20251214.18	0.28	NE	2.4	2	E
20251214.21	0.30	NE	2.4	4	N
20251215.00	0.41	NE	2.5	7	W
20251215.03	0.57	E	2.7	7	W
20251215.06	0.66	E	3.1	6	W
20251215.09	0.79	NE	3.3	7	NE
20251215.12	0.81	NE	3.7	8	E
20251215.15	0.72	NE	4.0	5	E
20251215.18	0.69	NE	3.9	1	NW
20251215.21	0.72	N	3.8	5	NW
20251216.00	0.83	NE	3.7	11	NW
20251216.03	0.98	E	-3.6	14	NE
20251216.06	1.22	SE	-3.8	18	E
20251216.09	1.42	SE	-4.1	12	S
20251216.12	1.26	SE	4.3	6	SE

Wind condition in the Fort-Shevchenko

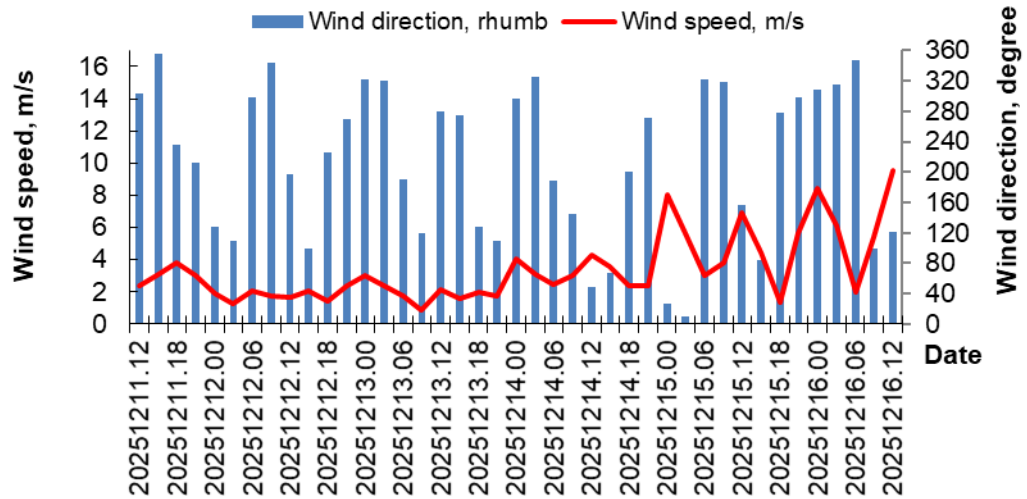


Wave condition in the Fort-Shevchenko

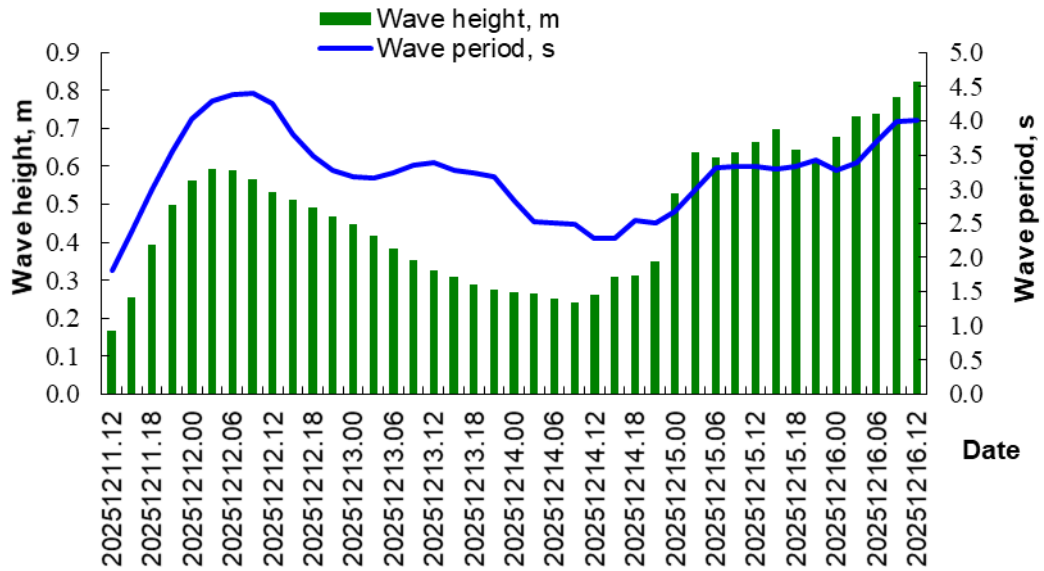


Date time	Fort-Shevchenko				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20251211.12	0.35	E	2.1	4	W
20251211.15	0.36	E	2.3	4	NW
20251211.18	0.34	E	2.5	3	W
20251211.21	0.37	E	3.0	3	SW
20251212.00	0.45	E	3.4	3	E
20251212.03	0.52	E	3.8	2	E
20251212.06	0.55	E	4.1	1	S
20251212.09	0.56	E	4.1	2	S
20251212.12	0.56	E	4.0	2	S
20251212.15	0.55	SE	3.9	2	S
20251212.18	0.53	SE	3.9	2	S
20251212.21	0.50	SE	4.0	2	S
20251213.00	0.48	SE	4.0	0	NE
20251213.03	0.45	S	3.9	1	NE
20251213.06	0.42	S	3.9	1	S
20251213.09	0.39	S	3.8	3	W
20251213.12	0.37	S	3.5	5	NW
20251213.15	0.36	S	3.0	3	NW
20251213.18	0.33	S	2.9	3	SE
20251213.21	0.30	S	3.0	3	E
20251214.00	0.28	S	2.8	4	N
20251214.03	0.27	S	2.5	4	NE
20251214.06	0.28	SE	2.2	3	NE
20251214.09	0.29	E	2.1	3	N
20251214.12	0.29	NE	2.1	1	SW
20251214.15	0.29	NE	2.3	3	S
20251214.18	0.28	NE	2.5	2	E
20251214.21	0.31	NE	2.6	4	N
20251215.00	0.45	E	2.6	7	W
20251215.03	0.61	E	2.9	7	W
20251215.06	0.68	E	3.2	6	W
20251215.09	0.81	NE	3.4	7	NE
20251215.12	0.88	NE	3.7	8	E
20251215.15	0.86	N	3.7	5	E
20251215.18	0.73	N	3.7	1	NW
20251215.21	0.66	N	3.7	5	NW
20251216.00	0.70	NE	3.6	11	NW
20251216.03	0.80	E	3.5	14	NE
20251216.06	0.91	SE	3.6	18	E
20251216.09	1.00	SE	3.8	12	S
20251216.12	0.93	SE	4.1	6	SE

Wind condition in the Aktau

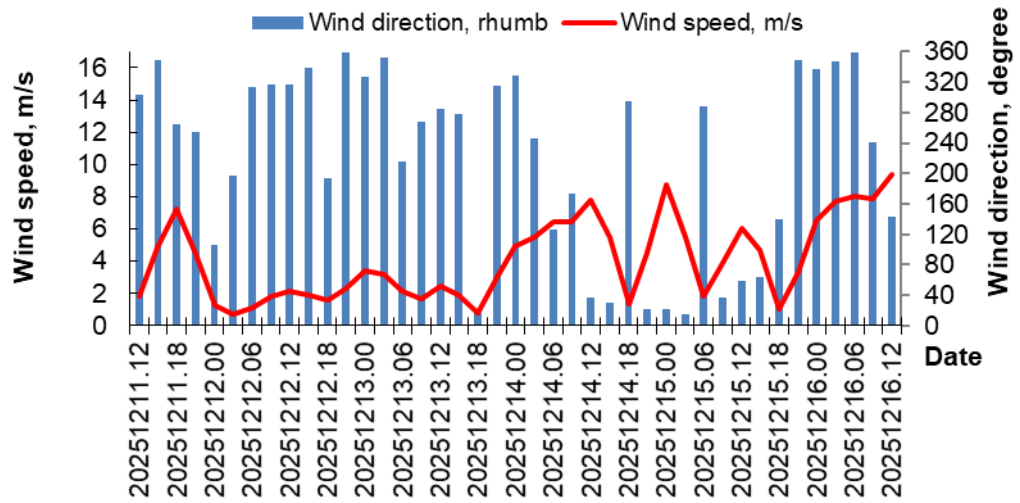


Wave condition in the Aktau

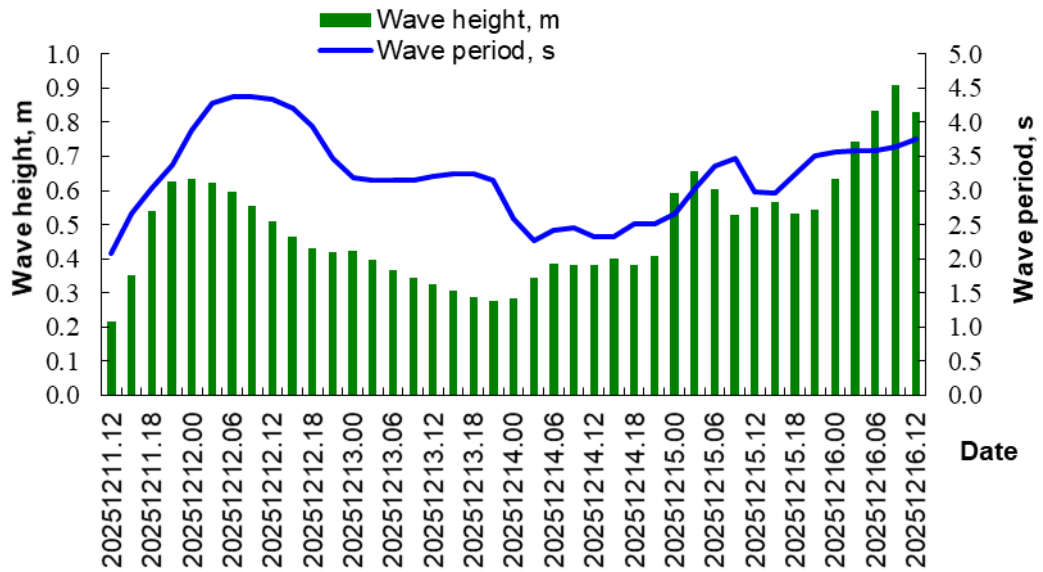


Date time	Aktau				
	Wave height, m	Направление волны, румб	Wave height, m	Скорость ветра, м/с	Wave height, m
20251211.12	0.17	SE	1.8	2	NW
20251211.15	0.26	SE	2.4	3	N
20251211.18	0.39	SE	3.0	4	SW
20251211.21	0.50	SE	3.6	3	SW
20251212.00	0.56	SE	4.0	2	SE
20251212.03	0.59	E	4.3	1	E
20251212.06	0.59	E	4.4	2	NW
20251212.09	0.56	E	4.4	2	N
20251212.12	0.53	SE	4.3	2	S
20251212.15	0.51	SE	3.8	2	E
20251212.18	0.49	SE	3.5	1	SW
20251212.21	0.47	SE	3.3	2	W
20251213.00	0.45	S	3.2	3	NW
20251213.03	0.42	S	3.2	2	NW
20251213.06	0.38	S	3.2	2	S
20251213.09	0.35	S	3.4	1	SE
20251213.12	0.33	SW	3.4	2	W
20251213.15	0.31	SW	3.3	2	W
20251213.18	0.29	SW	3.2	2	SE
20251213.21	0.27	SW	3.2	2	E
20251214.00	0.27	SW	2.8	4	NW
20251214.03	0.27	S	2.5	3	NW
20251214.06	0.25	S	2.5	2	S
20251214.09	0.24	SW	2.5	3	SE
20251214.12	0.26	NE	2.3	4	NE
20251214.15	0.31	NE	2.3	4	E
20251214.18	0.31	NE	2.5	2	S
20251214.21	0.35	NE	2.5	2	W
20251215.00	0.53	NE	2.7	8	NE
20251215.03	0.64	NE	3.0	6	N
20251215.06	0.62	NE	3.3	3	NW
20251215.09	0.64	NE	3.3	4	NW
20251215.12	0.66	NE	3.3	7	SE
20251215.15	0.70	NE	3.3	4	E
20251215.18	0.64	N	3.3	1	W
20251215.21	0.61	N	3.4	6	NW
20251216.00	0.68	NE	3.3	8	NW
20251216.03	0.73	E	3.4	6	NW
20251216.06	0.74	E	3.7	2	N
20251216.09	0.78	E	4.0	5	E
20251216.12	0.82	E	4.0	10	SE

Wind condition in the Peschanyi

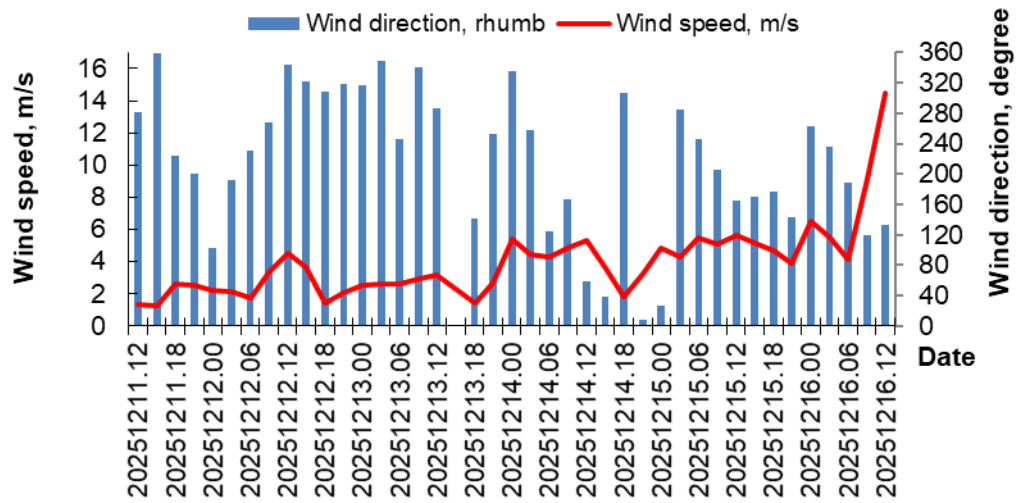


Wave condition in the Peschanyi

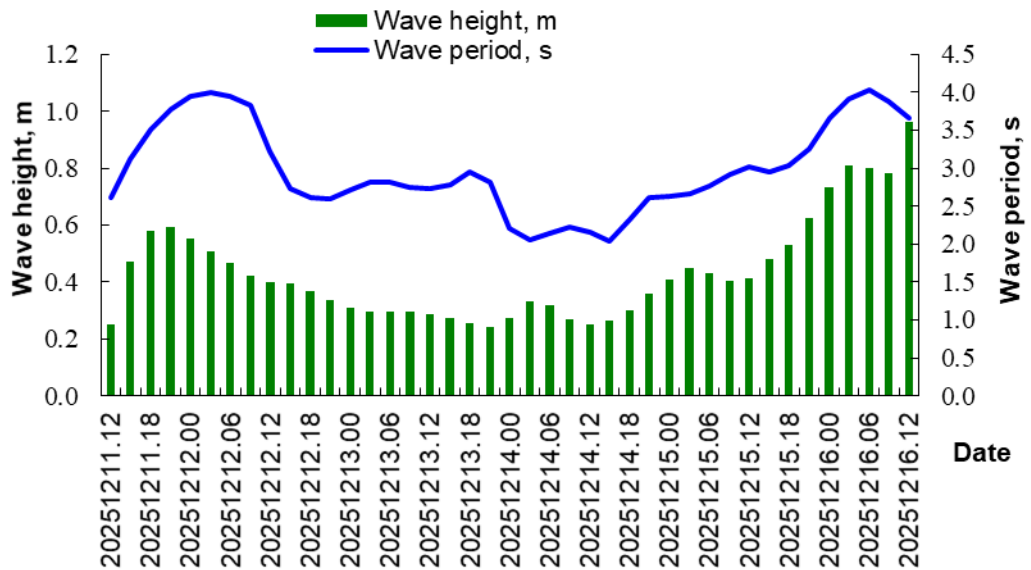


Date time	Peschanyi (Isan)				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20251211.12	0.22	S	2.1	2	NW
20251211.15	0.35	SE	2.7	5	N
20251211.18	0.54	SE	3.0	7	W
20251211.21	0.63	SE	3.4	4	W
20251212.00	0.63	SE	3.9	1	E
20251212.03	0.62	SE	4.3	1	S
20251212.06	0.60	SE	4.4	1	NW
20251212.09	0.56	SE	4.4	2	NW
20251212.12	0.51	SE	4.3	2	NW
20251212.15	0.46	SE	4.2	2	N
20251212.18	0.43	SE	3.9	2	S
20251212.21	0.42	SE	3.5	2	N
20251213.00	0.42	S	3.2	3	NW
20251213.03	0.40	S	3.2	3	N
20251213.06	0.37	S	3.2	2	SW
20251213.09	0.34	S	3.1	2	W
20251213.12	0.32	SW	3.2	2	W
20251213.15	0.31	SW	3.2	2	W
20251213.18	0.29	SW	3.2	1	N
20251213.21	0.27	SW	3.2	3	NW
20251214.00	0.28	S	2.6	5	NW
20251214.03	0.34	S	2.3	5	SW
20251214.06	0.38	SW	2.4	6	SE
20251214.09	0.38	W	2.5	6	S
20251214.12	0.38	N	2.3	8	NE
20251214.15	0.40	NE	2.3	6	NE
20251214.18	0.38	NE	2.5	1	NW
20251214.21	0.41	NE	2.5	5	NE
20251215.00	0.59	NE	2.7	9	N
20251215.03	0.66	NE	3.0	6	N
20251215.06	0.60	NE	3.4	2	W
20251215.09	0.53	NE	3.5	4	NE
20251215.12	0.55	NE	3.0	6	NE
20251215.15	0.57	NE	3.0	5	NE
20251215.18	0.53	NE	3.2	1	SE
20251215.21	0.54	NE	3.5	3	N
20251216.00	0.63	NE	3.6	7	NW
20251216.03	0.74	E	3.6	8	N
20251216.06	0.83	E	3.6	8	N
20251216.09	0.91	SE	3.7	8	SW
20251216.12	0.83	SE	3.7	9	SE

Wind condition in the Fetisovo

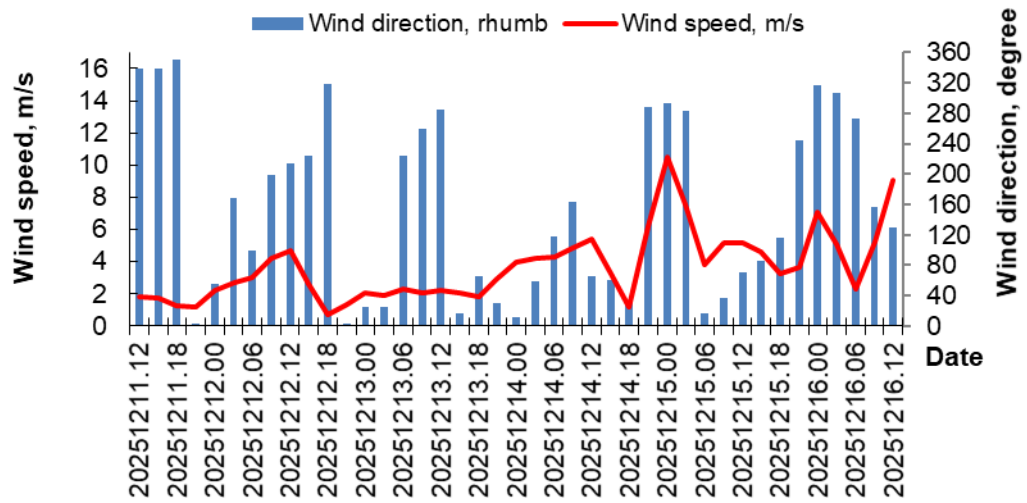


Wave condition in the Fetisovo

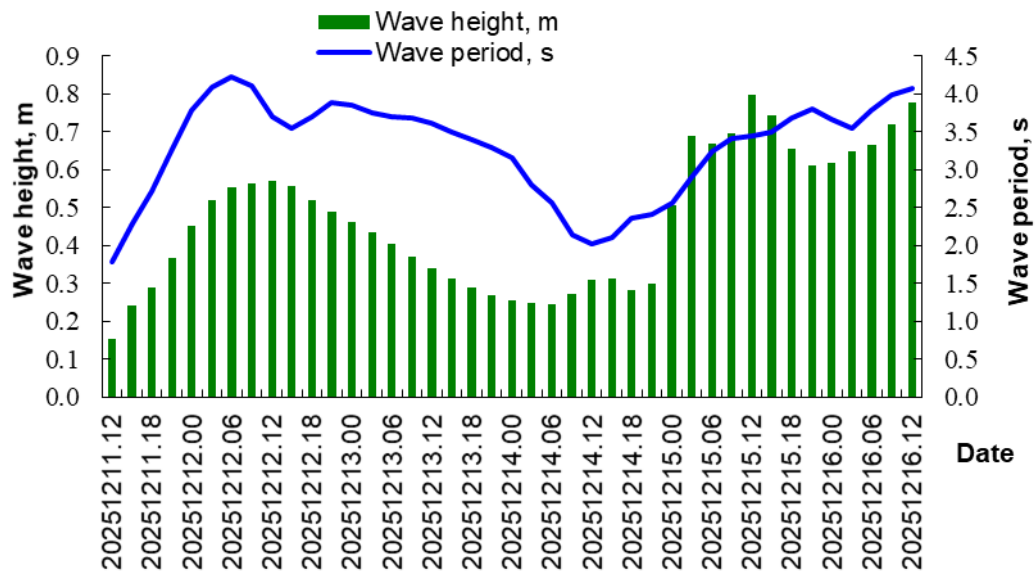


Date time	Fetisovo				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20251211.12	0.25	SE	2.6	1	W
20251211.15	0.47	SE	3.1	1	N
20251211.18	0.58	SE	3.5	3	SW
20251211.21	0.59	SE	3.8	3	S
20251212.00	0.55	SE	4.0	2	E
20251212.03	0.51	SE	4.0	2	S
20251212.06	0.47	SE	3.9	2	SW
20251212.09	0.42	SE	3.8	3	W
20251212.12	0.40	SE	3.2	5	N
20251212.15	0.39	SE	2.7	4	NW
20251212.18	0.37	SE	2.6	1	NW
20251212.21	0.34	SE	2.6	2	NW
20251213.00	0.31	S	2.7	3	NW
20251213.03	0.30	S	2.8	3	N
20251213.06	0.30	SW	2.8	3	SW
20251213.09	0.29	SW	2.7	3	N
20251213.12	0.29	SW	2.7	3	W
20251213.15	0.27	SW	2.8	2	N
20251213.18	0.25	SW	2.9	1	SE
20251213.21	0.24	SW	2.8	3	W
20251214.00	0.27	SW	2.2	5	NW
20251214.03	0.33	S	2.1	4	W
20251214.06	0.32	S	2.1	4	SE
20251214.09	0.27	SW	2.2	5	S
20251214.12	0.25	SW	2.2	5	NE
20251214.15	0.26	NE	2.0	4	NE
20251214.18	0.30	E	2.3	2	NW
20251214.21	0.36	E	2.6	3	N
20251215.00	0.41	E	2.6	5	NE
20251215.03	0.45	E	2.7	4	W
20251215.06	0.43	E	2.8	6	SW
20251215.09	0.40	E	2.9	5	SW
20251215.12	0.41	NE	3.0	6	S
20251215.15	0.48	N	2.9	5	S
20251215.18	0.53	N	3.0	5	S
20251215.21	0.62	NE	3.3	4	SE
20251216.00	0.73	NE	3.7	7	W
20251216.03	0.81	E	3.9	5	SW
20251216.06	0.80	E	4.0	4	S
20251216.09	0.78	NE	3.9	9	SE
20251216.12	0.96	N	3.7	14	SE

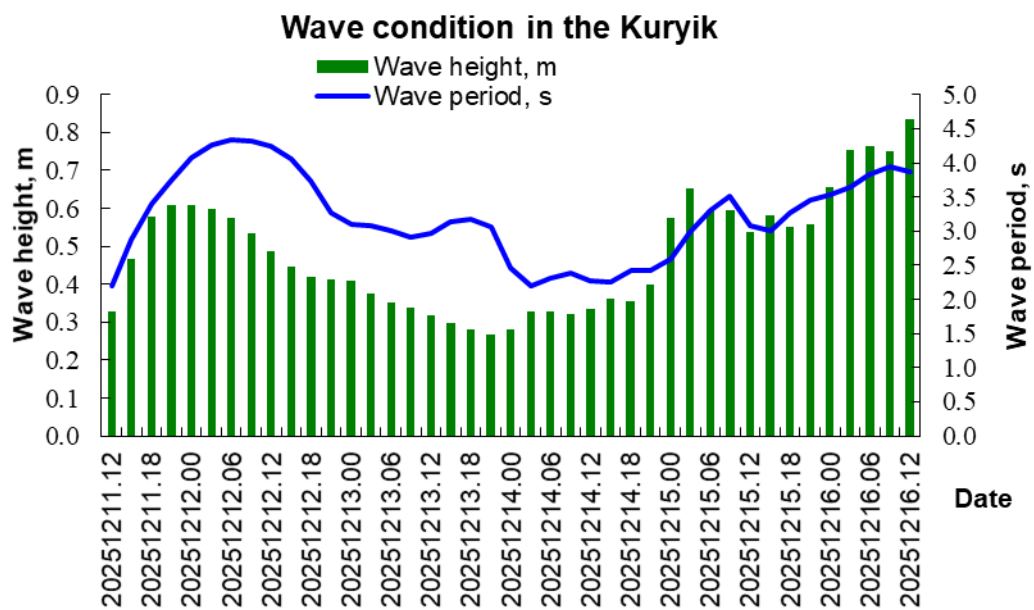
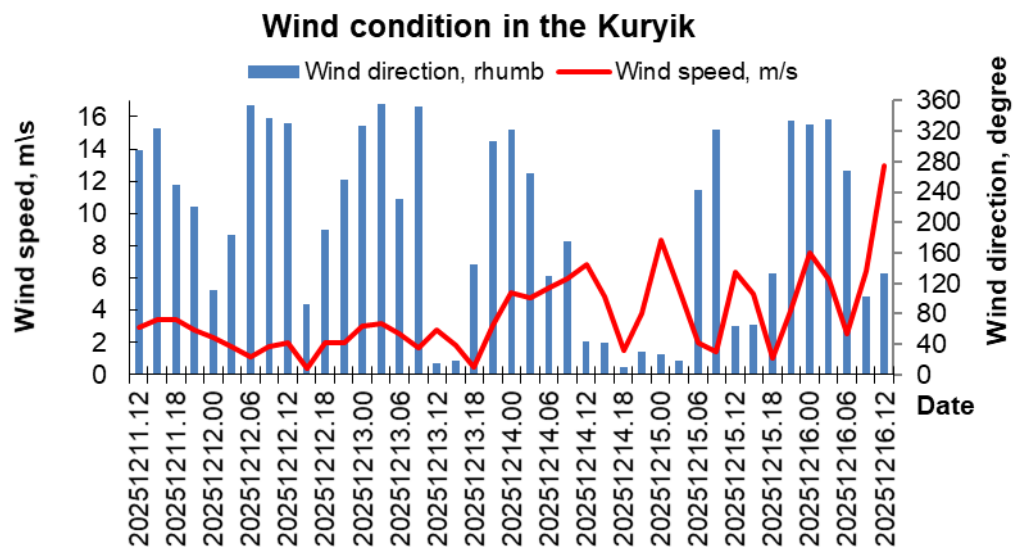
Wind condition in the Saura



Wave condition in the Saura



Date time	Saura				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20251211.12	0.15	SE	1.8	2	N
20251211.15	0.24	E	2.3	2	N
20251211.18	0.29	E	2.7	1	N
20251211.21	0.37	E	3.3	1	N
20251212.00	0.45	E	3.8	2	NE
20251212.03	0.52	E	4.1	3	S
20251212.06	0.56	E	4.2	3	E
20251212.09	0.57	E	4.1	4	S
20251212.12	0.57	E	3.7	5	SW
20251212.15	0.56	SE	3.5	3	SW
20251212.18	0.52	SE	3.7	1	NW
20251212.21	0.49	SE	3.9	1	N
20251213.00	0.46	SE	3.9	2	NE
20251213.03	0.43	S	3.8	2	NE
20251213.06	0.40	S	3.7	2	SW
20251213.09	0.37	S	3.7	2	W
20251213.12	0.34	S	3.6	2	W
20251213.15	0.31	S	3.5	2	N
20251213.18	0.29	S	3.4	2	NE
20251213.21	0.27	S	3.3	3	NE
20251214.00	0.26	S	3.2	4	N
20251214.03	0.25	S	2.8	4	NE
20251214.06	0.24	S	2.6	4	SE
20251214.09	0.27	W	2.1	5	S
20251214.12	0.31	N	2.0	5	NE
20251214.15	0.31	N	2.1	3	NE
20251214.18	0.28	NE	2.4	1	NE
20251214.21	0.30	NE	2.4	6	W
20251215.00	0.51	E	2.6	11	NW
20251215.03	0.69	E	2.9	8	W
20251215.06	0.67	E	3.2	4	N
20251215.09	0.70	E	3.4	5	NE
20251215.12	0.80	NE	3.4	5	E
20251215.15	0.74	NE	3.5	5	E
20251215.18	0.66	NE	3.7	3	SE
20251215.21	0.61	N	3.8	4	SW
20251216.00	0.62	NE	3.7	7	NW
20251216.03	0.65	NE	3.5	5	NW
20251216.06	0.67	E	3.8	2	W
20251216.09	0.72	E	4.0	5	SE
20251216.12	0.78	SE	4.1	9	SE



Date time	Kuryk				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20251211.12	0.33	SE	2.2	3	NW
20251211.15	0.47	SE	2.9	3	NW
20251211.18	0.58	SE	3.4	3	W
20251211.21	0.61	SE	3.7	3	SW
20251212.00	0.61	SE	4.1	2	E
20251212.03	0.60	SE	4.3	2	S
20251212.06	0.57	SE	4.3	1	N
20251212.09	0.53	SE	4.3	2	NW
20251212.12	0.49	SE	4.2	2	NW
20251212.15	0.45	SE	4.1	0	E
20251212.18	0.42	SE	3.7	2	S
20251212.21	0.41	S	3.3	2	W
20251213.00	0.41	S	3.1	3	NW
20251213.03	0.38	S	3.1	3	N
20251213.06	0.35	S	3.0	3	SW
20251213.09	0.34	SW	2.9	2	N
20251213.12	0.32	SW	3.0	3	N
20251213.15	0.30	SW	3.1	2	N
20251213.18	0.28	SW	3.2	0	SE
20251213.21	0.27	SW	3.1	3	NW
20251214.00	0.28	S	2.5	5	NW
20251214.03	0.33	S	2.2	5	W
20251214.06	0.33	SW	2.3	5	SE
20251214.09	0.32	W	2.4	6	S
20251214.12	0.33	N	2.3	7	NE
20251214.15	0.36	NE	2.2	5	NE
20251214.18	0.35	NE	2.4	2	N
20251214.21	0.40	NE	2.4	4	NE
20251215.00	0.58	NE	2.6	8	NE
20251215.03	0.65	NE	3.0	5	N
20251215.06	0.60	NE	3.3	2	SW
20251215.09	0.60	NE	3.5	1	NW
20251215.12	0.54	NE	3.1	6	NE
20251215.15	0.58	NE	3.0	5	NE
20251215.18	0.55	N	3.3	1	SE
20251215.21	0.56	NE	3.5	4	NW
20251216.00	0.66	NE	3.5	8	NW
20251216.03	0.75	E	3.7	6	NW
20251216.06	0.76	E	3.8	3	W
20251216.09	0.75	E	3.9	6	E
20251216.12	0.83	NE	3.9	13	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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