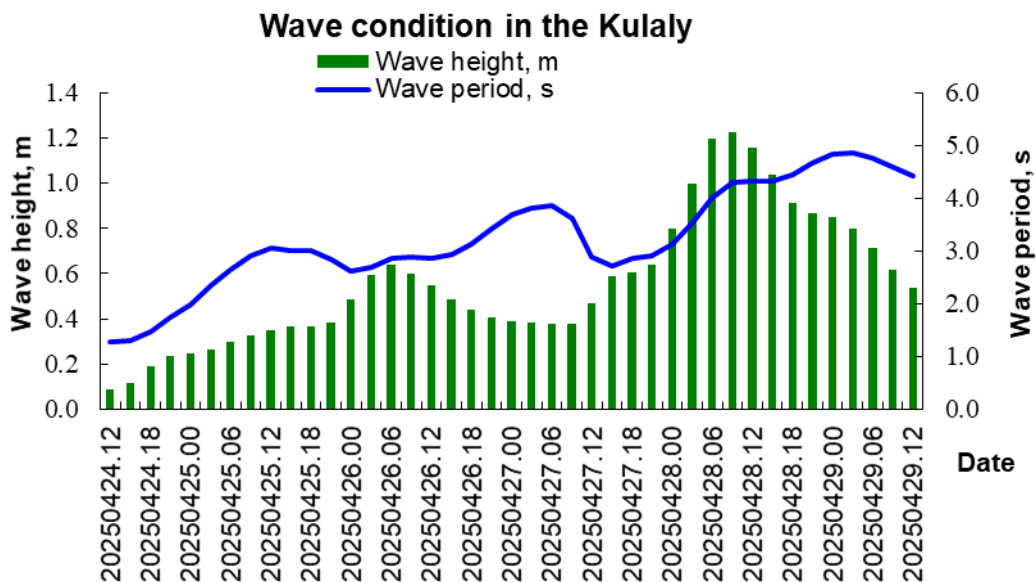
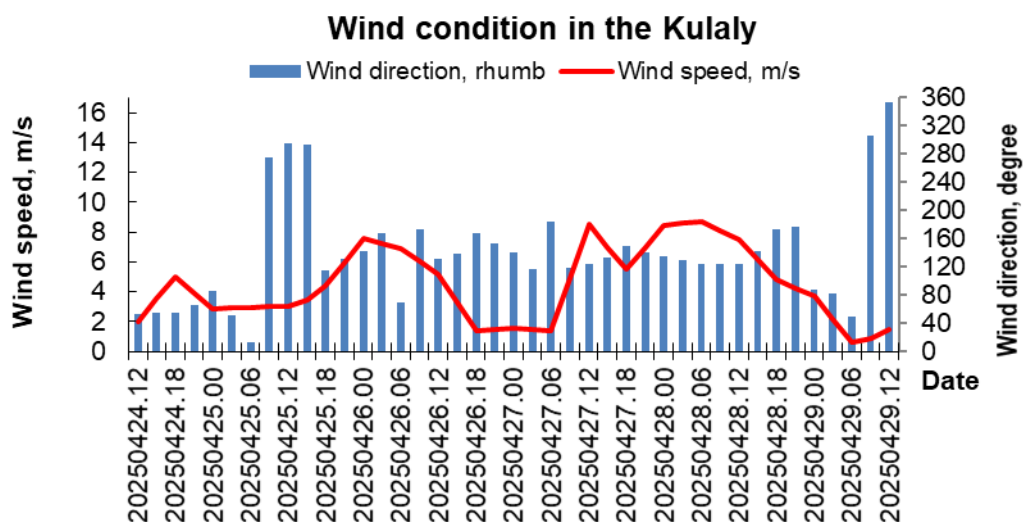




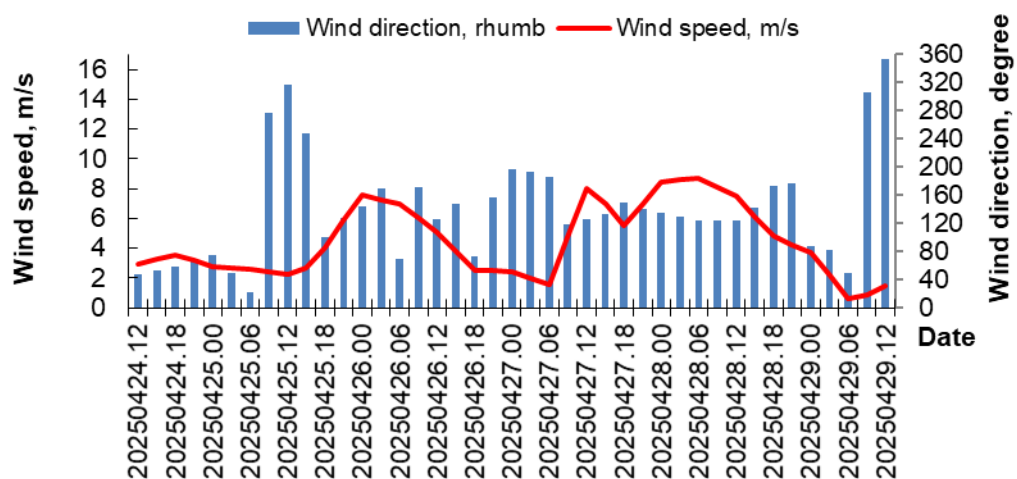
**MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»**

**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 24 – 29, 2025.**

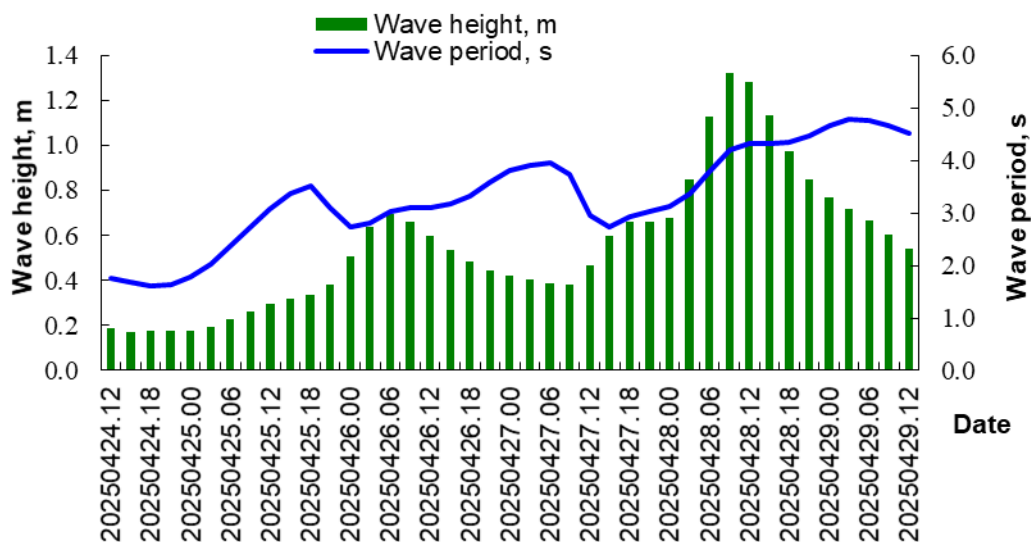


Date time	Kulaly				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250424.12	0.09	NE	1.3	2	NE
20250424.15	0.11	NE	1.3	4	NE
20250424.18	0.19	NE	1.5	5	NE
20250424.21	0.24	NE	1.7	4	NE
20250425.00	0.25	N	2.0	3	E
20250425.03	0.26	N	2.3	3	NE
20250425.06	0.30	NW	2.6	3	N
20250425.09	0.33	NW	2.9	3	W
20250425.12	0.35	NW	3.1	3	NW
20250425.15	0.36	NW	3.0	3	NW
20250425.18	0.37	NW	3.0	4	SE
20250425.21	0.38	NW	2.8	6	SE
20250426.00	0.48	NW	2.6	8	SE
20250426.03	0.59	NW	2.7	7	S
20250426.06	0.64	NW	2.9	7	E
20250426.09	0.60	N	2.9	6	S
20250426.12	0.55	N	2.9	5	SE
20250426.15	0.49	N	2.9	3	SE
20250426.18	0.44	N	3.1	1	S
20250426.21	0.41	NE	3.4	2	SE
20250427.00	0.39	NE	3.7	2	SE
20250427.03	0.38	NE	3.8	1	SE
20250427.06	0.38	NE	3.9	1	S
20250427.09	0.38	NE	3.6	5	SE
20250427.12	0.47	N	2.9	9	SE
20250427.15	0.59	NW	2.7	7	SE
20250427.18	0.60	NW	2.9	6	SE
20250427.21	0.64	NW	2.9	7	SE
20250428.00	0.80	NW	3.1	8	SE
20250428.03	1.00	NW	3.5	9	SE
20250428.06	1.19	NW	4.0	9	SE
20250428.09	1.23	NW	4.3	8	SE
20250428.12	1.16	NW	4.3	7	SE
20250428.15	1.04	NW	4.3	6	SE
20250428.18	0.91	NW	4.4	5	S
20250428.21	0.87	NW	4.7	4	S
20250429.00	0.85	NW	4.8	4	E
20250429.03	0.80	NW	4.9	2	E
20250429.06	0.71	NW	4.8	1	NE
20250429.09	0.62	NW	4.6	1	NW
20250429.12	0.53	NW	4.4	1	N

Wind condition in the Fort-Shevchenko

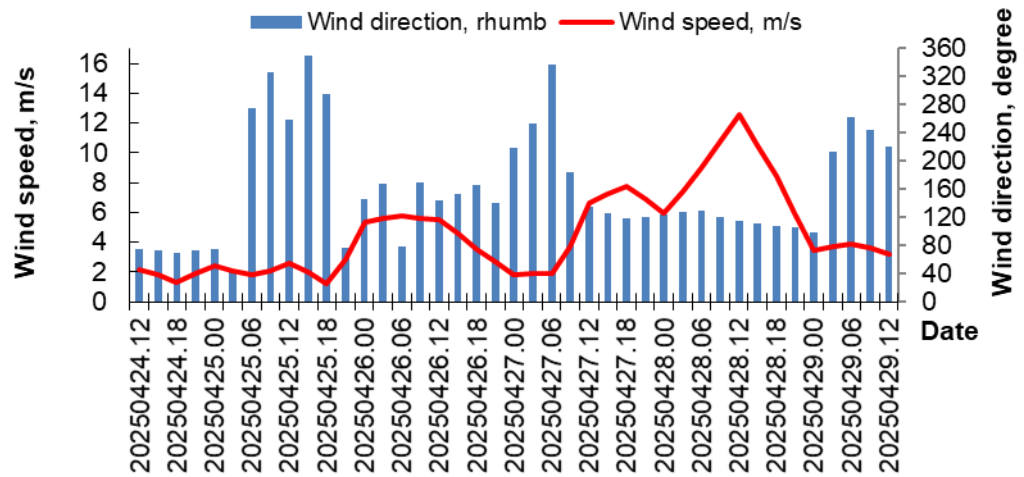


Wave condition in the Fort-Shevchenko

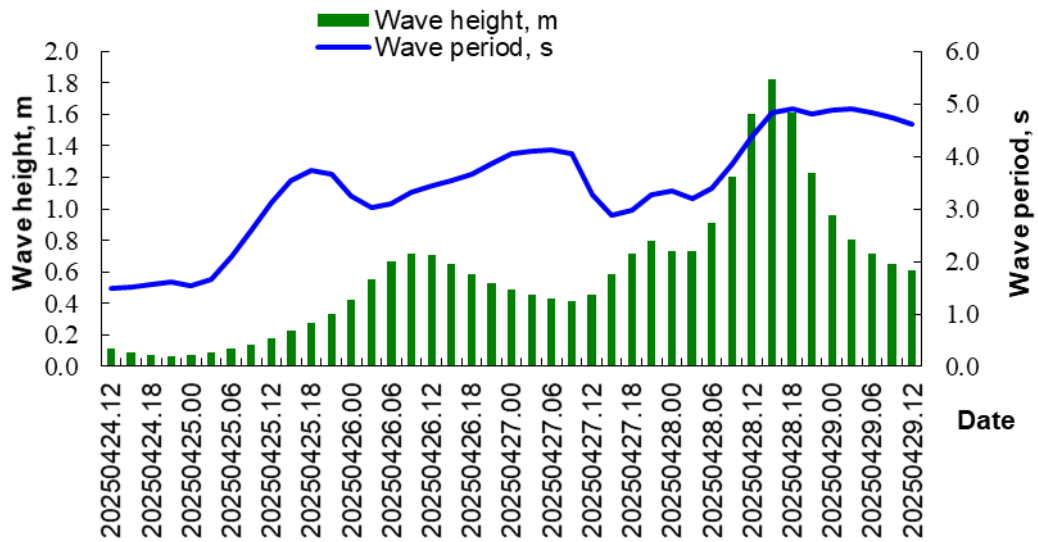


Date time	Fort-Shevchenko				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250424.12	0.19	NE	1.8	3	NE
20250424.15	0.17	NE	1.7	3	NE
20250424.18	0.18	NE	1.6	4	NE
20250424.21	0.17	NE	1.6	3	NE
20250425.00	0.18	N	1.8	3	E
20250425.03	0.20	N	2.0	3	NE
20250425.06	0.23	N	2.4	3	N
20250425.09	0.26	NW	2.7	2	W
20250425.12	0.30	NW	3.1	2	NW
20250425.15	0.32	NW	3.4	3	SW
20250425.18	0.34	NW	3.5	4	E
20250425.21	0.38	NW	3.1	6	SE
20250426.00	0.50	NW	2.7	8	SE
20250426.03	0.64	NW	2.8	7	S
20250426.06	0.69	N	3.0	7	E
20250426.09	0.66	N	3.1	6	S
20250426.12	0.60	N	3.1	5	SE
20250426.15	0.53	N	3.2	4	SE
20250426.18	0.48	N	3.3	3	E
20250426.21	0.45	NE	3.6	2	S
20250427.00	0.42	NE	3.8	2	S
20250427.03	0.40	NE	3.9	2	S
20250427.06	0.39	NE	4.0	2	S
20250427.09	0.38	NE	3.7	5	SE
20250427.12	0.47	N	2.9	8	SE
20250427.15	0.60	NW	2.7	7	SE
20250427.18	0.66	NW	2.9	6	SE
20250427.21	0.66	NW	3.0	7	SE
20250428.00	0.68	NW	3.1	8	SE
20250428.03	0.85	NW	3.4	9	SE
20250428.06	1.13	NW	3.8	9	SE
20250428.09	1.32	NW	4.2	8	SE
20250428.12	1.28	NW	4.3	7	SE
20250428.15	1.13	NW	4.3	6	SE
20250428.18	0.97	NW	4.3	5	S
20250428.21	0.85	NW	4.5	4	S
20250429.00	0.77	NW	4.7	4	E
20250429.03	0.72	NW	4.8	2	E
20250429.06	0.66	NW	4.8	1	NE
20250429.09	0.60	NW	4.7	1	NW
20250429.12	0.54	NW	4.5	1	N

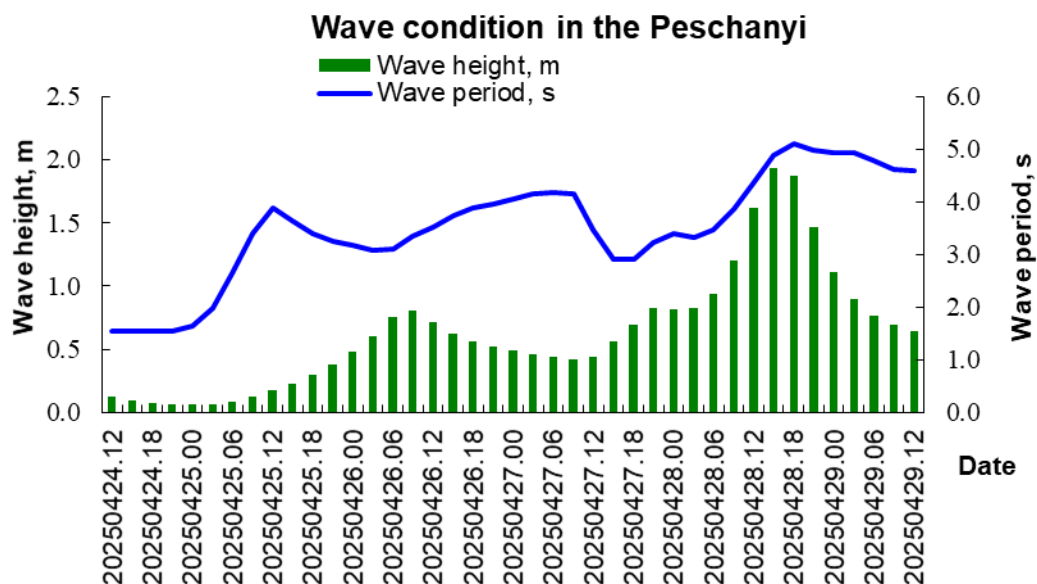
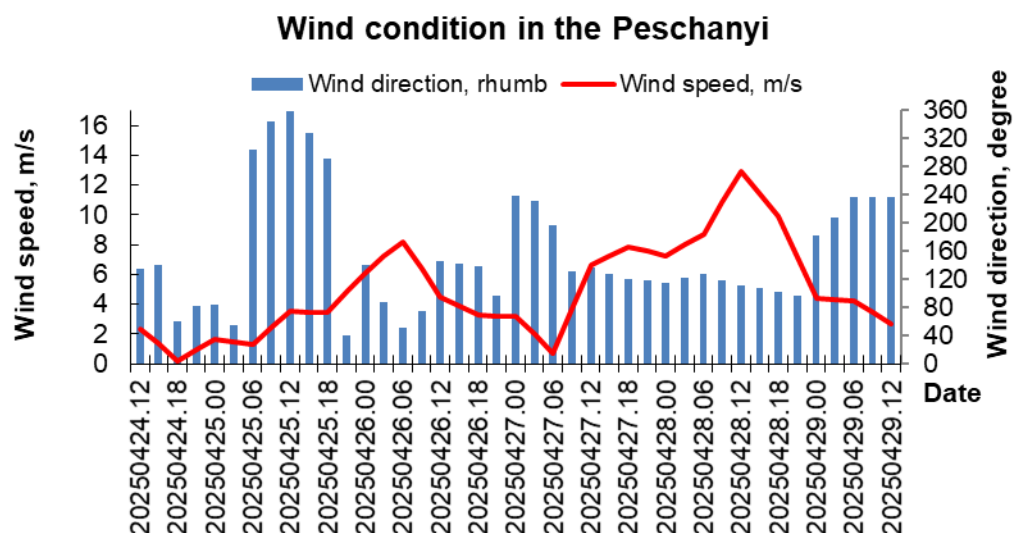
Wind condition in the Aktau



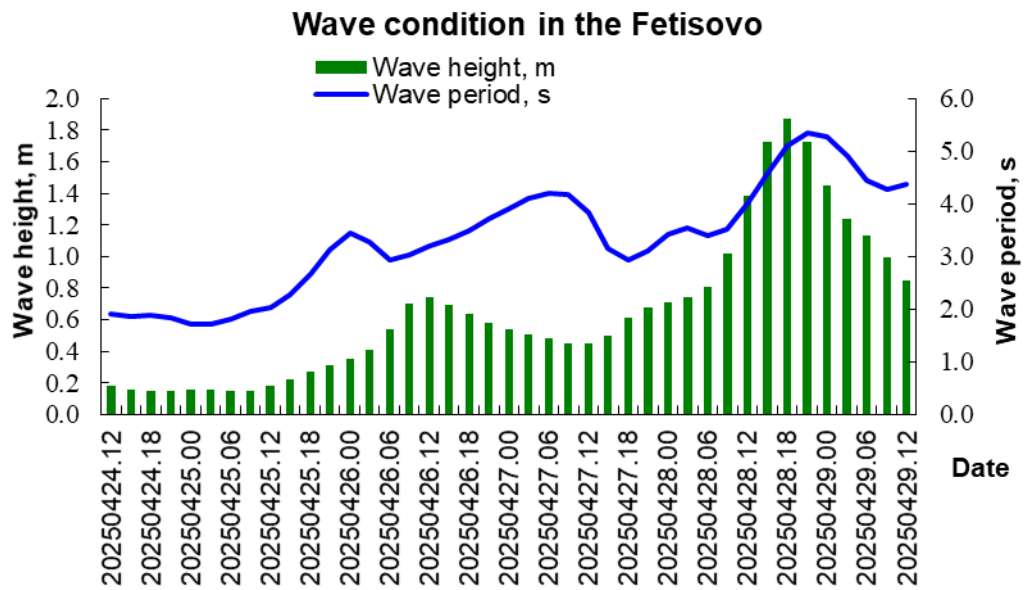
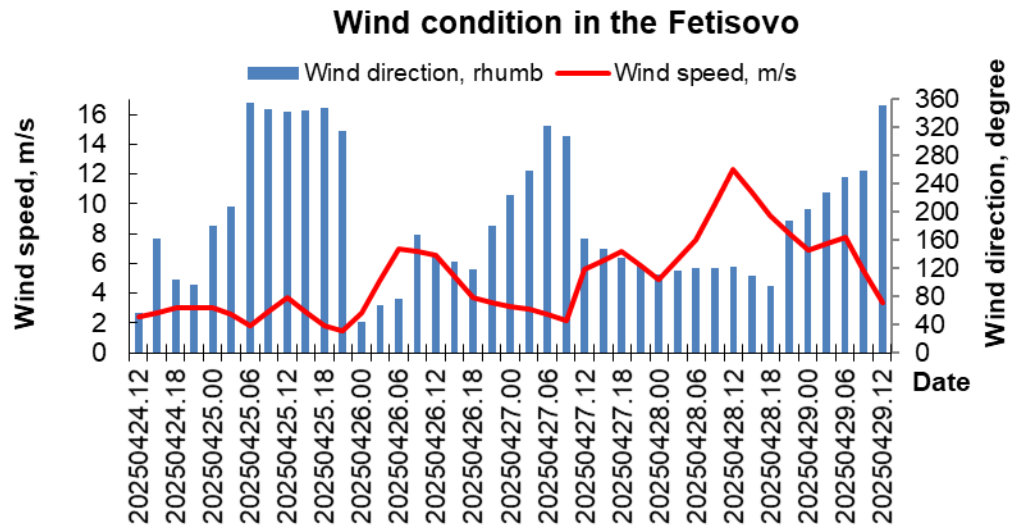
Wave condition in the Aktau



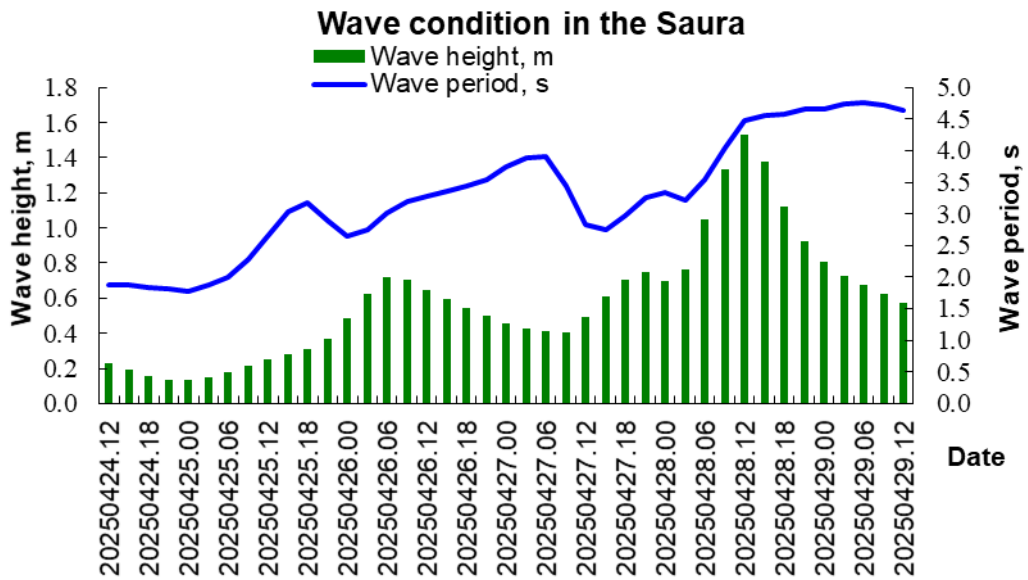
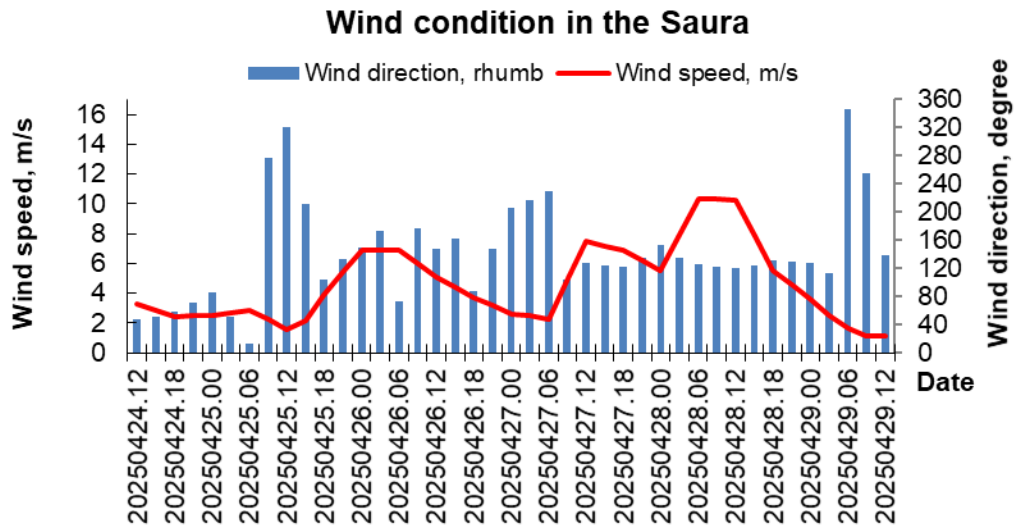
Date time	Aktau				
	Wave height, m	Направление волны, румб	Wave height, m	Скорость ветра, м/с	Wave height, m
20250424.12	0.12	N	1.5	2	E
20250424.15	0.09	N	1.5	2	E
20250424.18	0.07	N	1.6	1	E
20250424.21	0.07	N	1.6	2	E
20250425.00	0.08	N	1.5	2	E
20250425.03	0.09	N	1.7	2	NE
20250425.06	0.11	N	2.1	2	W
20250425.09	0.14	N	2.6	2	NW
20250425.12	0.18	N	3.1	3	W
20250425.15	0.23	N	3.5	2	N
20250425.18	0.28	N	3.7	1	NW
20250425.21	0.33	NE	3.6	3	E
20250426.00	0.42	NE	3.3	5	SE
20250426.03	0.55	N	3.0	6	S
20250426.06	0.67	N	3.1	6	E
20250426.09	0.72	N	3.3	6	S
20250426.12	0.71	N	3.4	6	SE
20250426.15	0.65	N	3.5	5	SE
20250426.18	0.59	N	3.7	4	S
20250426.21	0.53	N	3.9	3	SE
20250427.00	0.49	NE	4.0	2	SW
20250427.03	0.45	NE	4.1	2	W
20250427.06	0.43	NE	4.1	2	NW
20250427.09	0.41	NE	4.1	4	S
20250427.12	0.45	N	3.3	7	SE
20250427.15	0.58	NW	2.9	7	SE
20250427.18	0.72	NW	3.0	8	SE
20250427.21	0.80	NW	3.3	7	SE
20250428.00	0.73	NW	3.3	6	SE
20250428.03	0.73	NW	3.2	7	SE
20250428.06	0.91	NW	3.4	9	SE
20250428.09	1.20	NW	3.8	11	SE
20250428.12	1.60	NW	4.4	13	SE
20250428.15	1.82	NW	4.8	11	E
20250428.18	1.61	NW	4.9	8	E
20250428.21	1.23	NW	4.8	6	E
20250429.00	0.96	NW	4.9	3	E
20250429.03	0.81	NW	4.9	4	SW
20250429.06	0.72	NW	4.8	4	W
20250429.09	0.65	NW	4.7	4	SW
20250429.12	0.61	NW	4.6	3	SW



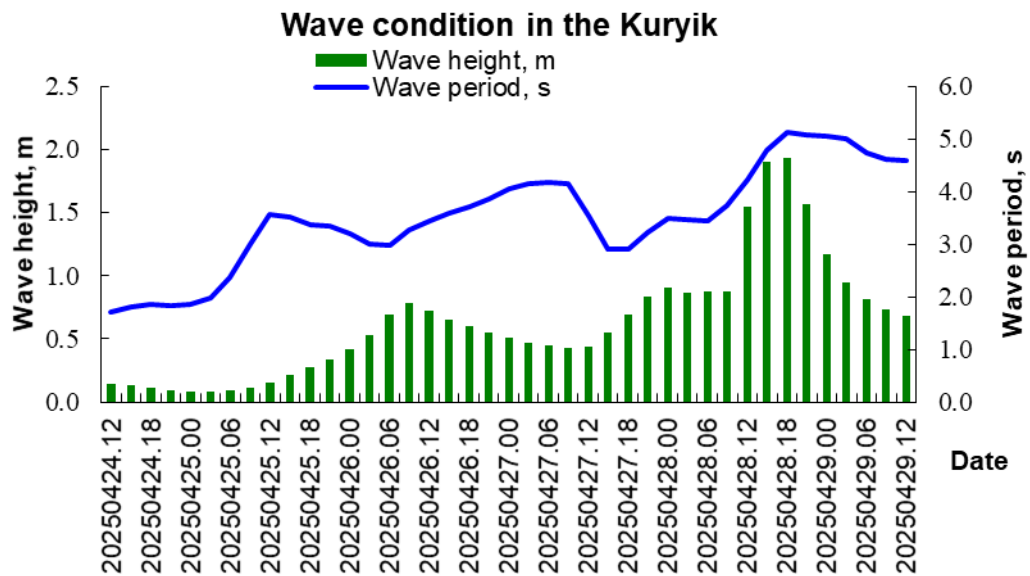
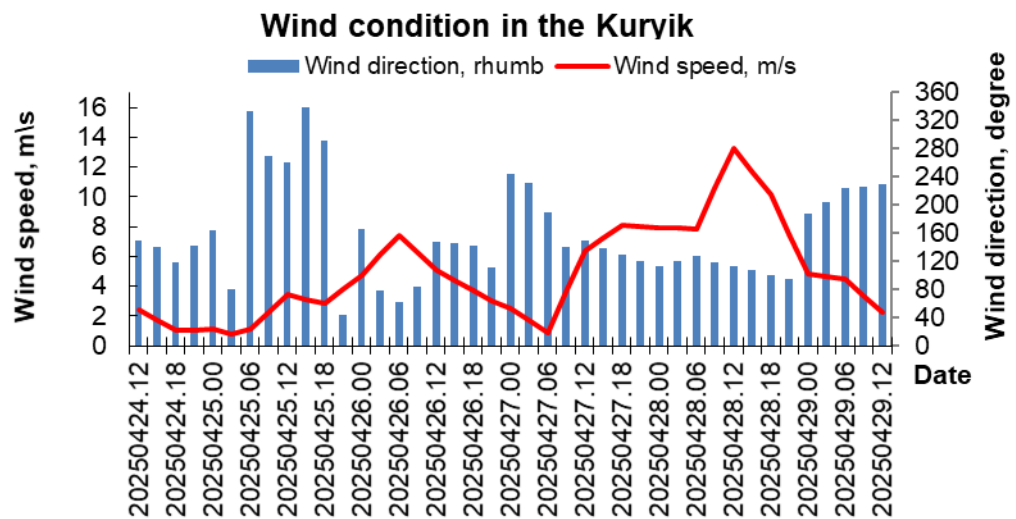
Date time	Peschanyi (Isan)				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250424.12	0.13	NW	1.5	2	SE
20250424.15	0.09	NW	1.5	1	SE
20250424.18	0.07	NW	1.5	0	NE
20250424.21	0.06	NW	1.5	1	E
20250425.00	0.06	NW	1.6	2	E
20250425.03	0.07	N	2.0	1	NE
20250425.06	0.09	N	2.7	1	NW
20250425.09	0.13	N	3.4	2	N
20250425.12	0.17	NE	3.9	4	N
20250425.15	0.23	NE	3.6	3	NW
20250425.18	0.30	NE	3.4	3	W
20250425.21	0.38	NE	3.2	5	NE
20250426.00	0.48	NE	3.2	6	SE
20250426.03	0.60	NE	3.1	7	E
20250426.06	0.76	NE	3.1	8	NE
20250426.09	0.81	NE	3.4	6	E
20250426.12	0.72	NE	3.5	5	SE
20250426.15	0.63	N	3.7	4	SE
20250426.18	0.57	N	3.9	3	SE
20250426.21	0.52	N	4.0	3	E
20250427.00	0.49	N	4.1	3	SW
20250427.03	0.46	NE	4.1	2	SW
20250427.06	0.44	NE	4.2	1	S
20250427.09	0.42	NE	4.2	4	SE
20250427.12	0.44	NE	3.5	7	SE
20250427.15	0.56	N	2.9	7	SE
20250427.18	0.70	NW	2.9	8	SE
20250427.21	0.83	NW	3.2	8	SE
20250428.00	0.82	NW	3.4	7	SE
20250428.03	0.82	NW	3.3	8	SE
20250428.06	0.94	NW	3.5	9	SE
20250428.09	1.20	NW	3.9	11	SE
20250428.12	1.62	NW	4.3	13	E
20250428.15	1.94	NW	4.9	11	E
20250428.18	1.87	NW	5.1	10	E
20250428.21	1.47	NW	5.0	7	E
20250429.00	1.11	NW	4.9	4	S
20250429.03	0.90	NW	4.9	4	SW
20250429.06	0.77	NW	4.8	4	SW
20250429.09	0.69	W	4.6	3	SW
20250429.12	0.64	W	4.6	3	SW



Date time	Fetisovo				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250424.12	0.18	NE	1.9	2	NE
20250424.15	0.16	NE	1.9	3	S
20250424.18	0.15	NE	1.9	3	E
20250424.21	0.15	NE	1.8	3	E
20250425.00	0.16	N	1.7	3	S
20250425.03	0.16	NW	1.7	3	SW
20250425.06	0.15	NW	1.8	2	N
20250425.09	0.15	N	1.9	3	N
20250425.12	0.18	N	2.0	4	N
20250425.15	0.22	NE	2.3	3	N
20250425.18	0.27	NE	2.7	2	N
20250425.21	0.31	NE	3.1	1	NW
20250426.00	0.35	NE	3.4	3	NE
20250426.03	0.41	NE	3.3	5	E
20250426.06	0.54	NE	2.9	7	E
20250426.09	0.70	NE	3.0	7	S
20250426.12	0.74	N	3.2	7	SE
20250426.15	0.70	N	3.3	5	SE
20250426.18	0.63	N	3.5	4	SE
20250426.21	0.58	N	3.7	3	S
20250427.00	0.54	N	3.9	3	SW
20250427.03	0.51	N	4.1	3	W
20250427.06	0.48	N	4.2	3	NW
20250427.09	0.45	N	4.2	2	NW
20250427.12	0.45	N	3.8	6	S
20250427.15	0.50	N	3.2	6	SE
20250427.18	0.61	N	2.9	7	SE
20250427.21	0.68	NW	3.1	6	SE
20250428.00	0.71	NW	3.4	5	E
20250428.03	0.74	NW	3.5	6	SE
20250428.06	0.80	NW	3.4	8	SE
20250428.09	1.02	NW	3.5	10	SE
20250428.12	1.38	NW	4.0	12	SE
20250428.15	1.72	NW	4.6	11	E
20250428.18	1.87	NW	5.1	9	E
20250428.21	1.73	NW	5.3	8	S
20250429.00	1.45	NW	5.3	7	SW
20250429.03	1.24	NW	4.9	7	SW
20250429.06	1.13	W	4.4	8	W
20250429.09	0.99	W	4.3	6	W
20250429.12	0.85	W	4.4	3	N



Date time	Saura				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250424.12	0.23	NE	1.9	3	NE
20250424.15	0.19	NE	1.9	3	NE
20250424.18	0.16	NE	1.8	2	NE
20250424.21	0.14	NE	1.8	2	E
20250425.00	0.13	N	1.8	3	E
20250425.03	0.15	N	1.9	3	NE
20250425.06	0.18	N	2.0	3	N
20250425.09	0.22	N	2.3	2	W
20250425.12	0.25	NW	2.7	2	NW
20250425.15	0.28	NW	3.0	2	SW
20250425.18	0.31	N	3.2	4	E
20250425.21	0.37	N	2.9	5	SE
20250426.00	0.49	N	2.6	7	SE
20250426.03	0.62	N	2.8	7	S
20250426.06	0.72	N	3.0	7	E
20250426.09	0.70	N	3.2	6	S
20250426.12	0.65	N	3.3	5	SE
20250426.15	0.59	N	3.4	4	S
20250426.18	0.54	N	3.4	4	E
20250426.21	0.50	N	3.5	3	SE
20250427.00	0.46	NE	3.7	3	SW
20250427.03	0.43	NE	3.9	2	SW
20250427.06	0.41	NE	3.9	2	SW
20250427.09	0.41	NE	3.4	5	E
20250427.12	0.49	N	2.8	7	SE
20250427.15	0.61	NW	2.8	7	SE
20250427.18	0.71	NW	3.0	7	SE
20250427.21	0.75	NW	3.3	6	SE
20250428.00	0.69	NW	3.3	6	SE
20250428.03	0.77	NW	3.2	8	SE
20250428.06	1.05	NW	3.5	10	SE
20250428.09	1.34	NW	4.1	10	SE
20250428.12	1.53	NW	4.5	10	SE
20250428.15	1.38	NW	4.6	8	SE
20250428.18	1.12	NW	4.6	6	SE
20250428.21	0.93	NW	4.7	5	SE
20250429.00	0.81	NW	4.7	4	SE
20250429.03	0.73	NW	4.7	3	SE
20250429.06	0.67	NW	4.8	2	N
20250429.09	0.62	NW	4.7	1	W
20250429.12	0.57	NW	4.6	1	SE



Date time	Kuryk				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250424.12	0.15	NW	1.7	2	SE
20250424.15	0.13	NW	1.8	2	SE
20250424.18	0.11	NW	1.8	1	SE
20250424.21	0.09	NW	1.8	1	SE
20250425.00	0.08	NW	1.9	1	S
20250425.03	0.08	NW	2.0	1	E
20250425.06	0.09	N	2.4	1	NW
20250425.09	0.12	N	3.0	2	W
20250425.12	0.16	N	3.6	3	W
20250425.15	0.21	NE	3.5	3	N
20250425.18	0.27	NE	3.4	3	W
20250425.21	0.34	NE	3.3	4	NE
20250426.00	0.42	NE	3.2	5	S
20250426.03	0.53	NE	3.0	6	E
20250426.06	0.70	NE	3.0	7	NE
20250426.09	0.78	NE	3.3	6	E
20250426.12	0.73	NE	3.4	5	SE
20250426.15	0.66	N	3.6	4	SE
20250426.18	0.60	N	3.7	4	SE
20250426.21	0.55	N	3.8	3	E
20250427.00	0.51	N	4.0	2	SW
20250427.03	0.47	N	4.2	2	SW
20250427.06	0.45	NE	4.2	1	S
20250427.09	0.42	NE	4.2	4	SE
20250427.12	0.44	NE	3.5	6	SE
20250427.15	0.55	N	2.9	7	SE
20250427.18	0.69	NW	2.9	8	SE
20250427.21	0.84	NW	3.2	8	SE
20250428.00	0.91	NW	3.5	8	SE
20250428.03	0.87	NW	3.5	8	SE
20250428.06	0.87	NW	3.4	8	SE
20250428.09	0.87	NW	3.7	11	SE
20250428.12	1.54	NW	4.2	13	SE
20250428.15	1.90	NW	4.8	12	E
20250428.18	1.94	NW	5.1	10	E
20250428.21	1.56	NW	5.1	7	E
20250429.00	1.17	NW	5.1	5	S
20250429.03	0.94	NW	5.0	5	SW
20250429.06	0.81	NW	4.7	4	SW
20250429.09	0.73	W	4.6	3	SW
20250429.12	0.68	W	4.6	2	SW

**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: Shishkina G.M.

RSE «Kazhydromet» – Caspian Sea Hydrometeorological Research Department

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