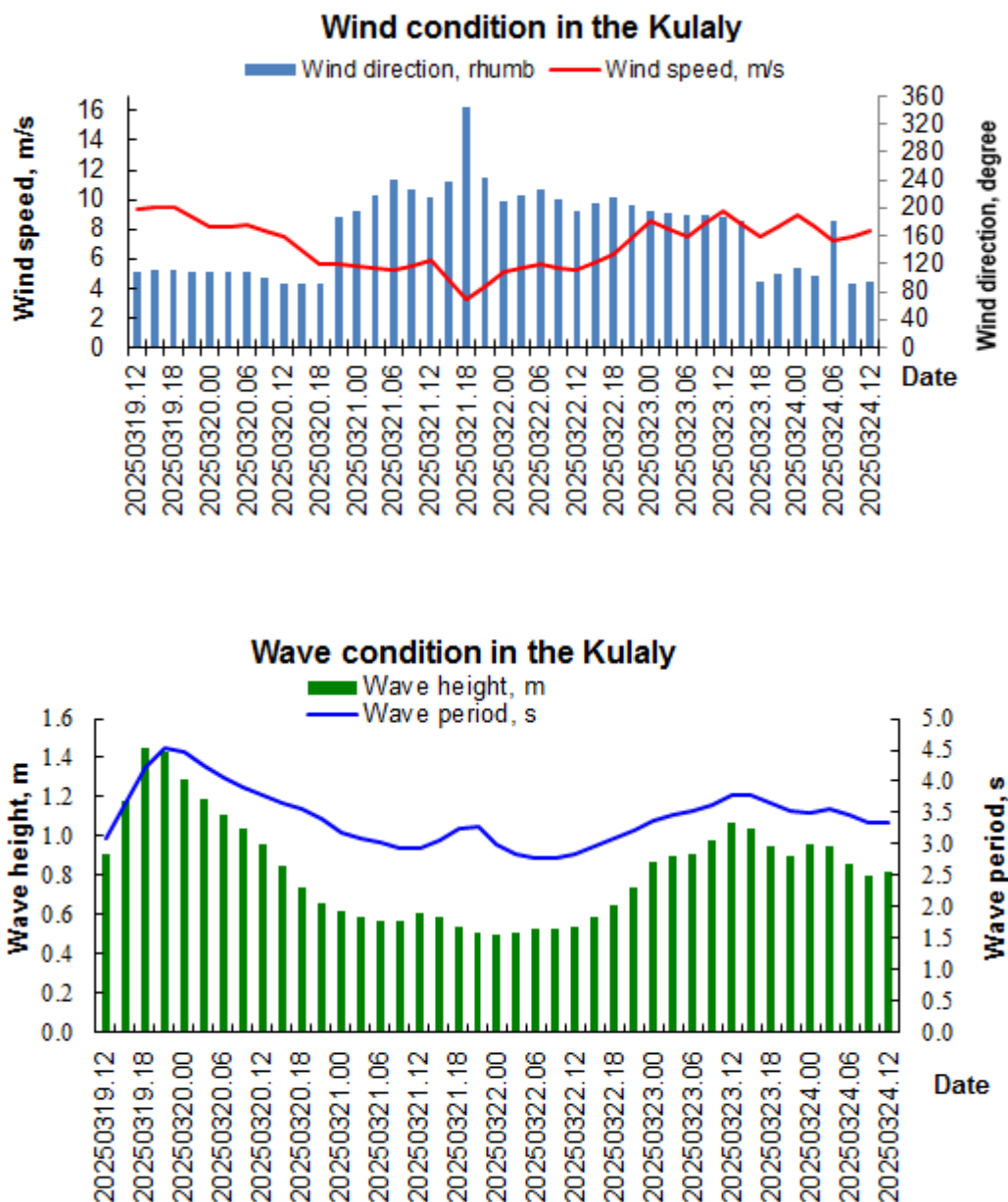




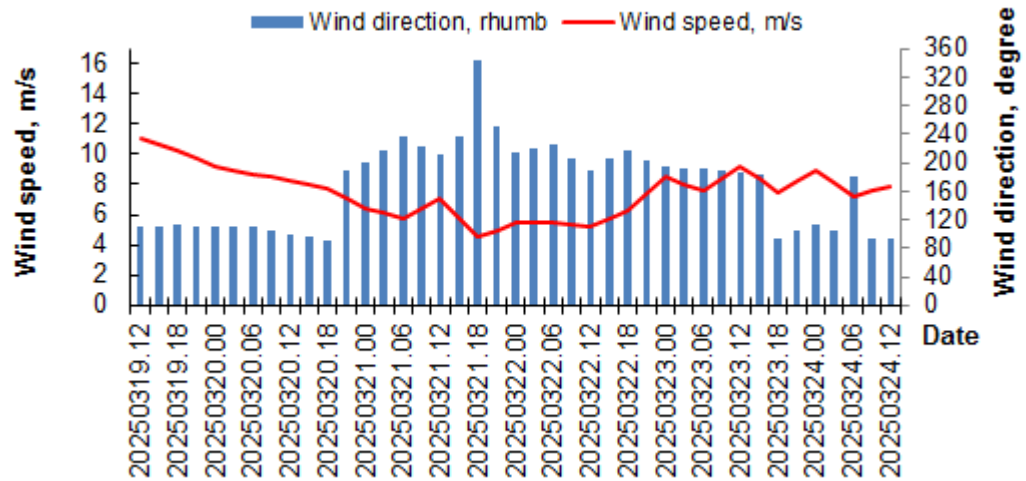
MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»

Wave and wind forecast for the Kazakhstan part of the Caspian Sea with a 5-day advance
for the period March 19-24, 2025.

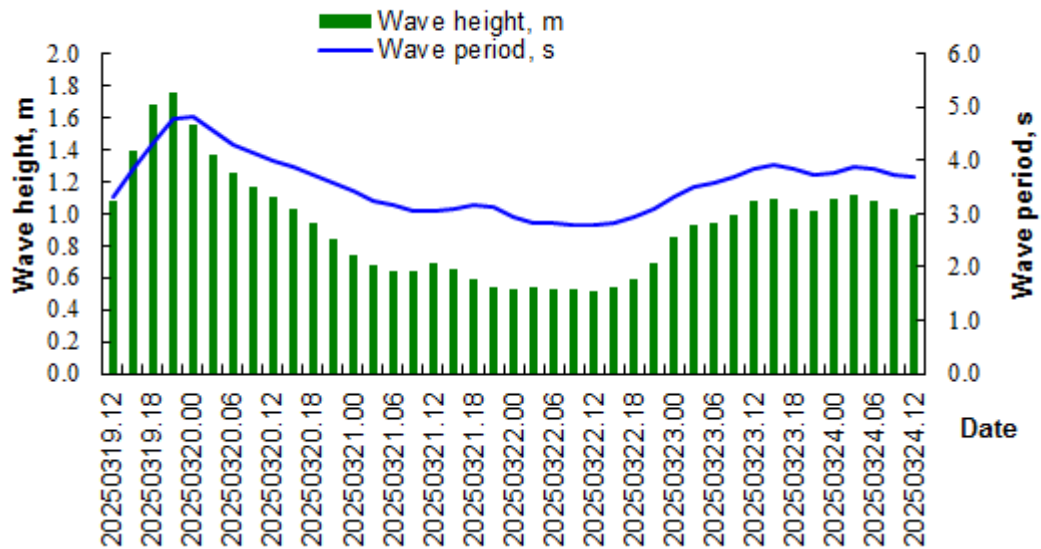


Date time	Kulaly				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250319.12	0.91	W	3.1	9	E
20250319.15	1.18	NW	3.7	9	E
20250319.18	1.45	NW	4.2	9	E
20250319.21	1.43	NW	4.5	9	E
20250320.00	1.29	NW	4.5	8	E
20250320.03	1.19	NW	4.3	8	E
20250320.06	1.11	NW	4.1	8	E
20250320.09	1.04	W	3.9	8	E
20250320.12	0.96	W	3.8	8	E
20250320.15	0.85	W	3.6	7	E
20250320.18	0.74	W	3.6	6	E
20250320.21	0.66	W	3.4	6	S
20250321.00	0.62	W	3.2	6	S
20250321.03	0.59	W	3.1	5	SW
20250321.06	0.57	W	3.0	5	SW
20250321.09	0.57	SW	2.9	6	SW
20250321.12	0.60	SW	2.9	6	SW
20250321.15	0.59	SW	3.1	5	SW
20250321.18	0.54	SW	3.3	3	N
20250321.21	0.50	SW	3.3	4	SW
20250322.00	0.50	SW	3.0	5	SW
20250322.03	0.51	SW	2.8	5	SW
20250322.06	0.52	SW	2.8	6	SW
20250322.09	0.53	SW	2.8	5	SW
20250322.12	0.54	SW	2.8	5	S
20250322.15	0.58	SW	3.0	6	SW
20250322.18	0.65	SW	3.1	6	SW
20250322.21	0.74	SW	3.2	7	SW
20250323.00	0.87	SW	3.4	9	S
20250323.03	0.90	SW	3.5	8	S
20250323.06	0.91	SW	3.5	8	S
20250323.09	0.98	W	3.6	8	S
20250323.12	1.07	W	3.8	9	S
20250323.15	1.04	W	3.8	8	S
20250323.18	0.94	W	3.6	7	E
20250323.21	0.90	W	3.5	8	E
20250324.00	0.96	W	3.5	9	SE
20250324.03	0.95	W	3.6	8	E
20250324.06	0.86	W	3.5	7	S
20250324.09	0.80	W	3.4	8	E
20250324.12	0.82	W	3.4	8	E

Wind condition in the Fort-Shevchenko

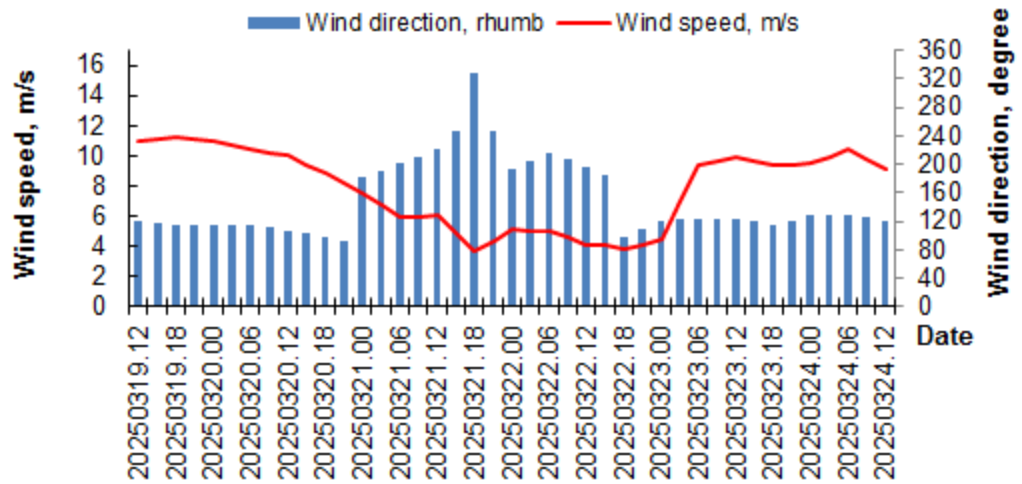


Wave condition in the Fort-Shevchenko

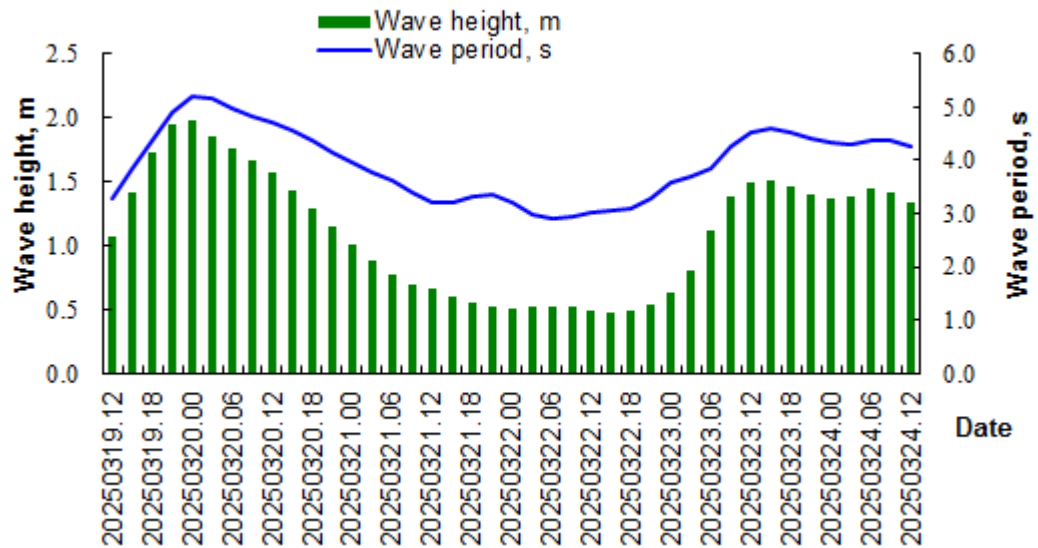


Date time	Fort-Shevchenko				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250319.12	1.08	W	3.3	11	E
20250319.15	1.39	W	3.8	11	E
20250319.18	1.68	NW	4.3	10	SE
20250319.21	1.75	NW	4.8	10	E
20250320.00	1.56	NW	4.8	9	E
20250320.03	1.37	NW	4.6	9	E
20250320.06	1.25	NW	4.3	9	E
20250320.09	1.17	NW	4.1	8	E
20250320.12	1.10	W	4.0	8	E
20250320.15	1.02	W	3.9	8	E
20250320.18	0.94	W	3.7	8	E
20250320.21	0.84	W	3.6	7	S
20250321.00	0.74	W	3.4	6	S
20250321.03	0.68	W	3.2	6	SW
20250321.06	0.64	W	3.1	6	SW
20250321.09	0.64	SW	3.0	6	SW
20250321.12	0.69	SW	3.0	7	SW
20250321.15	0.65	SW	3.1	6	SW
20250321.18	0.58	SW	3.2	5	N
20250321.21	0.54	SW	3.1	5	W
20250322.00	0.53	SW	2.9	5	SW
20250322.03	0.53	SW	2.8	5	SW
20250322.06	0.53	SW	2.8	5	SW
20250322.09	0.52	SW	2.8	5	SW
20250322.12	0.51	SW	2.8	5	S
20250322.15	0.53	SW	2.8	6	SW
20250322.18	0.59	SW	2.9	6	SW
20250322.21	0.69	SW	3.1	7	SW
20250323.00	0.85	W	3.3	9	S
20250323.03	0.92	W	3.5	8	S
20250323.06	0.94	W	3.6	8	S
20250323.09	0.99	W	3.7	8	S
20250323.12	1.08	W	3.9	9	S
20250323.15	1.09	W	3.9	8	S
20250323.18	1.03	W	3.8	7	E
20250323.21	1.01	W	3.7	8	E
20250324.00	1.09	W	3.8	9	SE
20250324.03	1.11	W	3.9	8	E
20250324.06	1.08	W	3.8	7	S
20250324.09	1.03	W	3.7	8	E
20250324.12	0.99	W	3.7	8	E

Wind condition in the Aktau

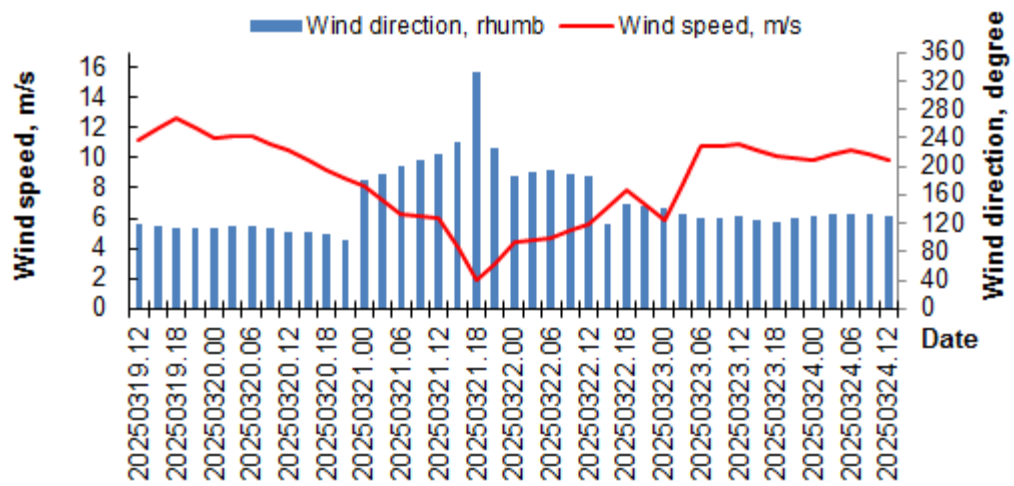


Wave condition in the Aktau

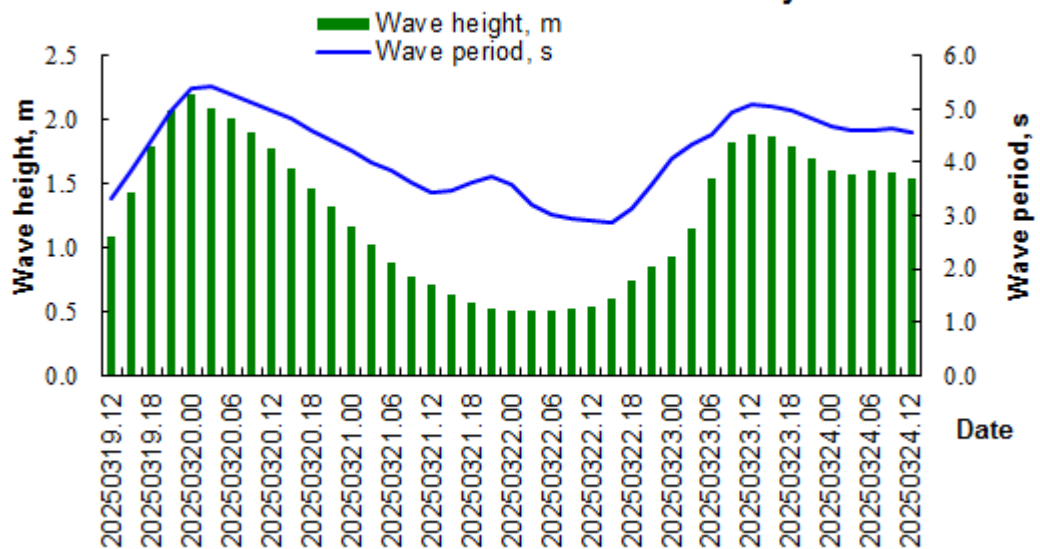


Date time	Aktau				
	Wave height, m	Направление волны, румб	Wave height, m	Скорость ветра, м/с	Wave height, m
20250319.12	1.07	NW	3.3	11	SE
20250319.15	1.41	NW	3.8	11	SE
20250319.18	1.73	NW	4.4	11	SE
20250319.21	1.95	NW	4.9	11	SE
20250320.00	1.98	NW	5.2	11	SE
20250320.03	1.86	NW	5.1	11	SE
20250320.06	1.75	NW	5.0	10	SE
20250320.09	1.66	NW	4.8	10	E
20250320.12	1.56	NW	4.7	10	E
20250320.15	1.44	NW	4.6	9	E
20250320.18	1.29	NW	4.4	9	E
20250320.21	1.15	W	4.1	8	E
20250321.00	1.01	W	4.0	8	S
20250321.03	0.88	W	3.8	7	S
20250321.06	0.77	W	3.6	6	S
20250321.09	0.69	W	3.4	6	SW
20250321.12	0.66	W	3.2	6	SW
20250321.15	0.60	W	3.2	5	SW
20250321.18	0.55	SW	3.3	4	NW
20250321.21	0.52	SW	3.4	4	SW
20250322.00	0.51	SW	3.2	5	S
20250322.03	0.52	SW	3.0	5	SW
20250322.06	0.53	SW	2.9	5	SW
20250322.09	0.52	SW	3.0	5	SW
20250322.12	0.49	SW	3.0	4	S
20250322.15	0.47	SW	3.0	4	S
20250322.18	0.48	SW	3.1	4	E
20250322.21	0.54	W	3.3	4	E
20250323.00	0.63	NW	3.6	4	SE
20250323.03	0.81	NW	3.7	7	SE
20250323.06	1.12	NW	3.8	9	SE
20250323.09	1.38	NW	4.3	10	SE
20250323.12	1.49	NW	4.5	10	SE
20250323.15	1.51	NW	4.6	10	SE
20250323.18	1.46	NW	4.5	9	SE
20250323.21	1.41	NW	4.4	9	SE
20250324.00	1.37	NW	4.3	10	SE
20250324.03	1.39	NW	4.3	10	SE
20250324.06	1.44	NW	4.4	10	SE
20250324.09	1.41	NW	4.4	10	SE
20250324.12	1.33	NW	4.3	9	SE

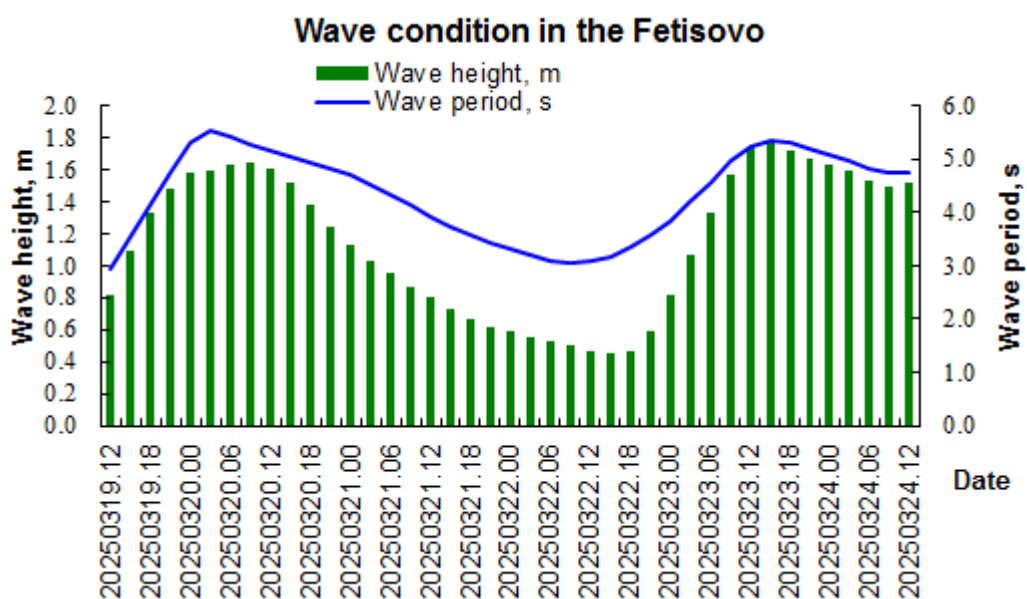
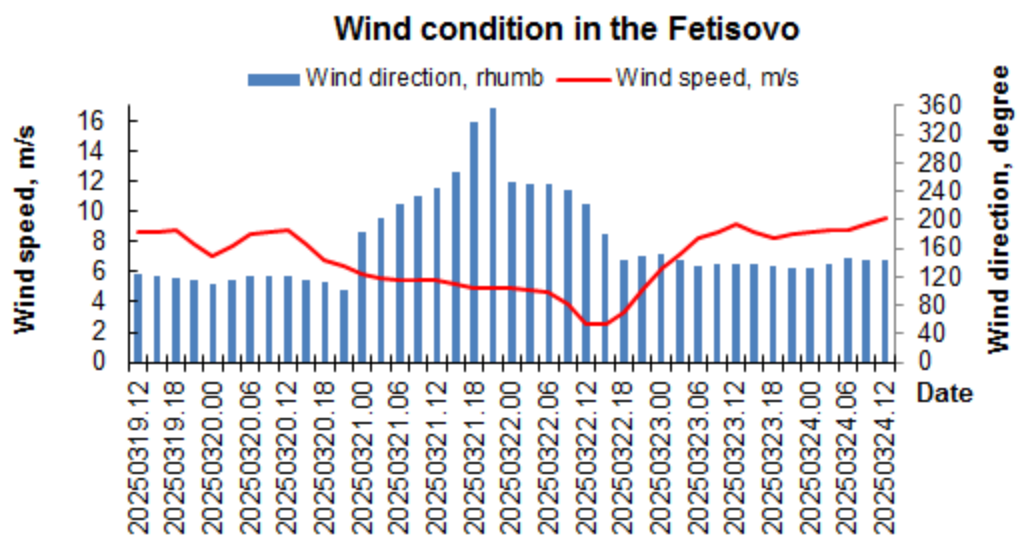
Wind condition in the Peschanyi



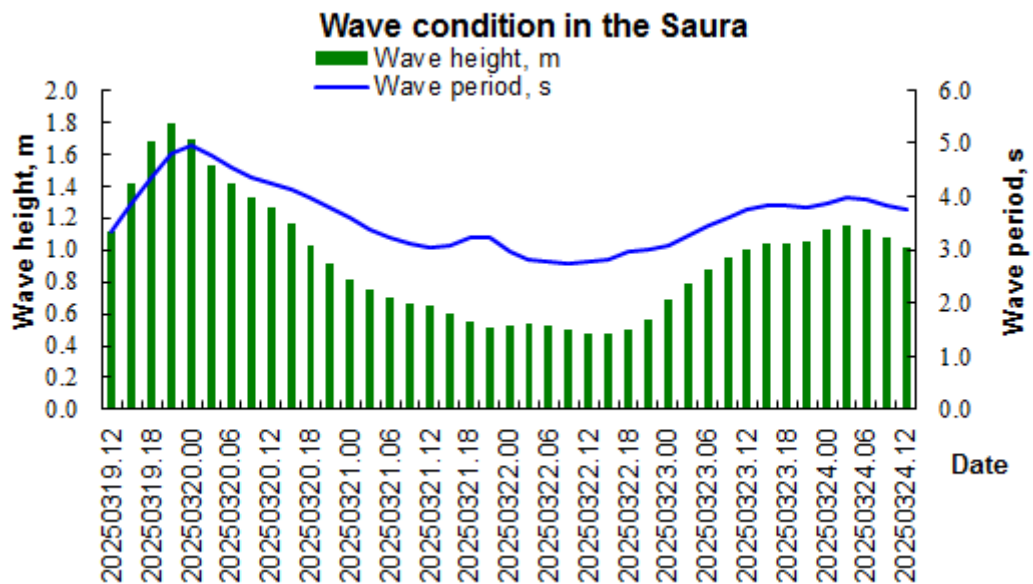
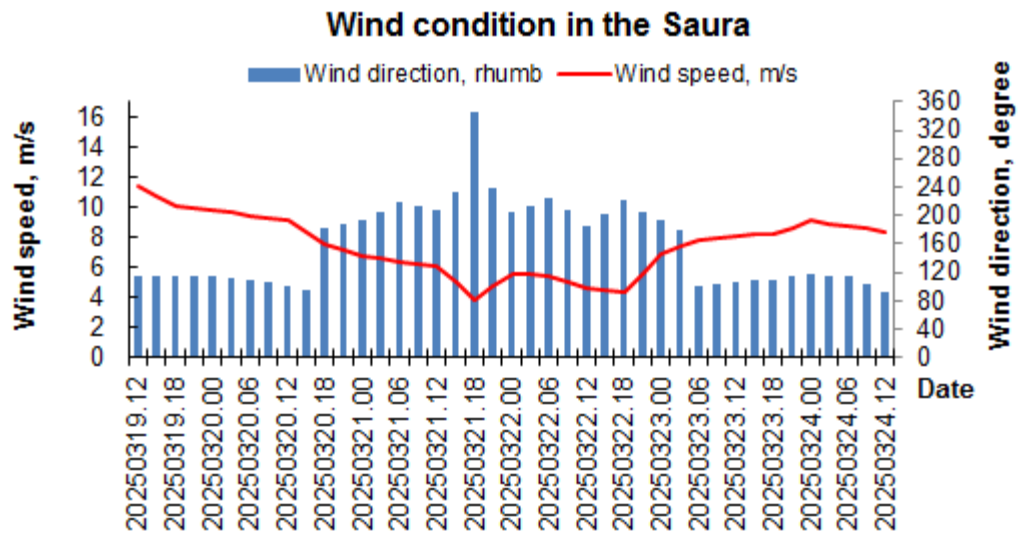
Wave condition in the Peschanyi



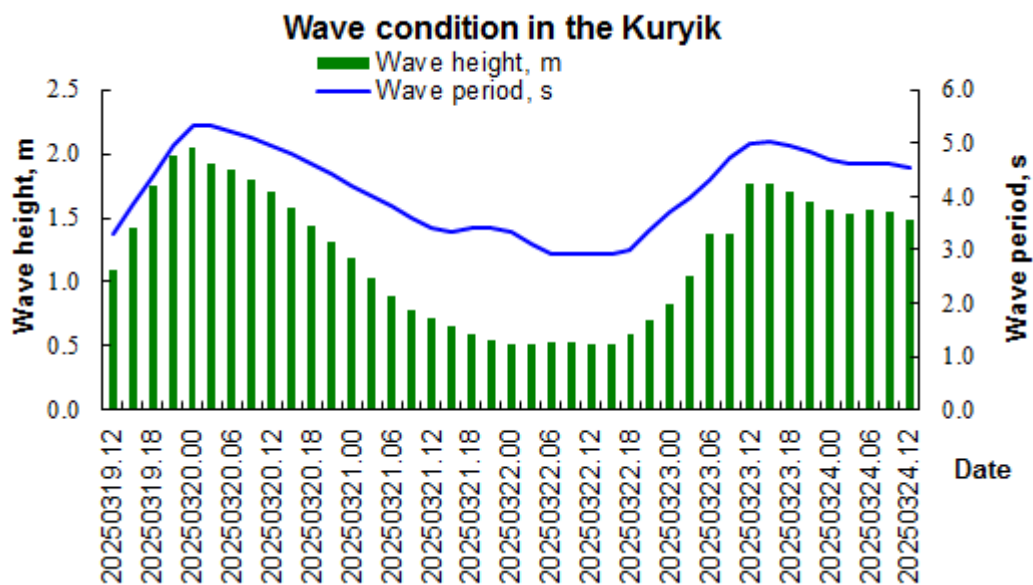
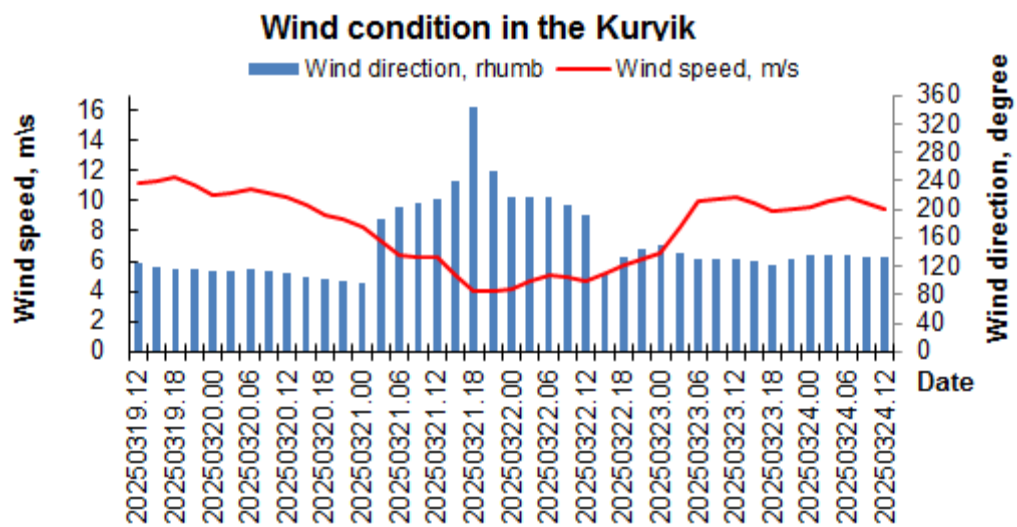
Date time	Peschanyi (Isan)				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250319.12	1.09	NW	3.3	11	SE
20250319.15	1.42	NW	3.9	12	SE
20250319.18	1.78	NW	4.4	13	SE
20250319.21	2.07	NW	5.0	12	SE
20250320.00	2.19	NW	5.4	11	SE
20250320.03	2.09	NW	5.4	11	SE
20250320.06	2.01	NW	5.3	11	SE
20250320.09	1.90	NW	5.1	11	SE
20250320.12	1.77	NW	5.0	10	E
20250320.15	1.61	NW	4.8	10	E
20250320.18	1.46	NW	4.6	9	E
20250320.21	1.31	W	4.4	9	E
20250321.00	1.17	W	4.2	8	S
20250321.03	1.01	W	4.0	7	S
20250321.06	0.87	W	3.8	6	S
20250321.09	0.77	W	3.6	6	SW
20250321.12	0.71	W	3.4	6	SW
20250321.15	0.63	W	3.5	4	SW
20250321.18	0.56	W	3.6	2	NW
20250321.21	0.52	W	3.7	3	SW
20250322.00	0.50	SW	3.6	4	S
20250322.03	0.50	SW	3.2	5	S
20250322.06	0.51	SW	3.0	5	S
20250322.09	0.52	SW	2.9	5	S
20250322.12	0.54	SW	2.9	6	S
20250322.15	0.60	W	2.9	7	SE
20250322.18	0.74	NW	3.1	8	SE
20250322.21	0.85	NW	3.6	7	SE
20250323.00	0.93	NW	4.1	6	SE
20250323.03	1.15	NW	4.3	8	SE
20250323.06	1.53	NW	4.5	11	SE
20250323.09	1.82	NW	4.9	11	SE
20250323.12	1.89	NW	5.1	11	SE
20250323.15	1.86	NW	5.1	11	SE
20250323.18	1.78	NW	5.0	10	SE
20250323.21	1.69	NW	4.8	10	SE
20250324.00	1.60	NW	4.7	10	SE
20250324.03	1.57	NW	4.6	10	SE
20250324.06	1.60	NW	4.6	11	SE
20250324.09	1.59	NW	4.6	10	SE
20250324.12	1.54	NW	4.5	10	SE



Date time	Fetisovo				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250319.12	0.82	NW	3.0	9	SE
20250319.15	1.09	NW	3.5	9	SE
20250319.18	1.33	NW	4.1	9	SE
20250319.21	1.48	NW	4.7	8	SE
20250320.00	1.58	NW	5.3	7	E
20250320.03	1.60	NW	5.5	8	SE
20250320.06	1.62	NW	5.4	9	SE
20250320.09	1.64	NW	5.3	9	SE
20250320.12	1.60	NW	5.2	9	SE
20250320.15	1.52	NW	5.0	8	SE
20250320.18	1.38	NW	4.9	7	E
20250320.21	1.24	NW	4.8	6	E
20250321.00	1.13	NW	4.7	6	S
20250321.03	1.03	NW	4.5	6	S
20250321.06	0.95	W	4.3	5	SW
20250321.09	0.87	W	4.1	5	SW
20250321.12	0.80	W	3.9	5	SW
20250321.15	0.73	W	3.7	5	W
20250321.18	0.67	W	3.6	5	NW
20250321.21	0.62	SW	3.4	5	N
20250322.00	0.59	SW	3.3	5	W
20250322.03	0.56	SW	3.2	5	W
20250322.06	0.53	SW	3.1	5	W
20250322.09	0.50	SW	3.1	4	SW
20250322.12	0.47	SW	3.1	3	SW
20250322.15	0.45	SW	3.2	3	S
20250322.18	0.46	W	3.3	3	SE
20250322.21	0.59	NW	3.6	5	SE
20250323.00	0.82	N	3.8	6	SE
20250323.03	1.07	N	4.2	7	SE
20250323.06	1.33	N	4.6	8	SE
20250323.09	1.57	N	5.0	9	SE
20250323.12	1.73	N	5.2	9	SE
20250323.15	1.77	N	5.3	9	SE
20250323.18	1.72	N	5.3	8	SE
20250323.21	1.67	NW	5.2	8	SE
20250324.00	1.63	NW	5.1	9	SE
20250324.03	1.59	NW	5.0	9	SE
20250324.06	1.53	NW	4.8	9	SE
20250324.09	1.50	NW	4.7	9	SE
20250324.12	1.51	NW	4.7	10	SE



Date time	Saura				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250319.12	1.11	NW	3.3	11	SE
20250319.15	1.41	NW	3.9	11	SE
20250319.18	1.67	NW	4.4	10	SE
20250319.21	1.79	NW	4.8	10	SE
20250320.00	1.69	NW	5.0	10	SE
20250320.03	1.53	NW	4.8	10	SE
20250320.06	1.41	NW	4.6	9	E
20250320.09	1.33	NW	4.4	9	E
20250320.12	1.27	NW	4.2	9	E
20250320.15	1.16	W	4.1	8	E
20250320.18	1.03	W	4.0	7	S
20250320.21	0.91	W	3.8	7	S
20250321.00	0.82	W	3.6	7	S
20250321.03	0.75	W	3.4	7	SW
20250321.06	0.70	W	3.2	6	SW
20250321.09	0.67	W	3.1	6	SW
20250321.12	0.65	W	3.1	6	SW
20250321.15	0.60	SW	3.1	5	SW
20250321.18	0.55	SW	3.2	4	N
20250321.21	0.52	SW	3.2	5	SW
20250322.00	0.52	SW	3.0	6	SW
20250322.03	0.53	SW	2.8	6	SW
20250322.06	0.52	SW	2.8	5	SW
20250322.09	0.50	SW	2.7	5	SW
20250322.12	0.48	SW	2.8	5	S
20250322.15	0.48	SW	2.8	5	S
20250322.18	0.50	SW	3.0	4	SW
20250322.21	0.57	SW	3.0	6	SW
20250323.00	0.68	SW	3.1	7	S
20250323.03	0.79	W	3.3	7	S
20250323.06	0.88	W	3.4	8	E
20250323.09	0.95	W	3.6	8	E
20250323.12	1.00	W	3.8	8	E
20250323.15	1.04	W	3.8	8	E
20250323.18	1.04	W	3.8	8	E
20250323.21	1.06	W	3.8	9	SE
20250324.00	1.12	NW	3.9	9	SE
20250324.03	1.15	NW	4.0	9	SE
20250324.06	1.13	NW	3.9	9	SE
20250324.09	1.08	NW	3.8	9	E
20250324.12	1.02	W	3.8	8	E



Date time	Kuryik				
	Wave height, m	Wave direction, rhumb	Wave period, s	Wind speed, m/s	Wind direction, rhumb
20250319.12	1.09	NW	3.3	11	SE
20250319.15	1.41	NW	3.8	11	SE
20250319.18	1.75	NW	4.4	12	SE
20250319.21	1.99	NW	4.9	11	SE
20250320.00	2.04	NW	5.3	10	SE
20250320.03	1.93	NW	5.3	11	SE
20250320.06	1.88	NW	5.2	11	SE
20250320.09	1.80	NW	5.1	10	E
20250320.12	1.71	NW	5.0	10	E
20250320.15	1.58	NW	4.8	10	E
20250320.18	1.44	NW	4.6	9	E
20250320.21	1.31	NW	4.4	9	E
20250321.00	1.19	NW	4.2	8	E
20250321.03	1.04	W	4.0	7	S
20250321.06	0.89	W	3.8	6	SW
20250321.09	0.78	W	3.6	6	SW
20250321.12	0.72	W	3.4	6	SW
20250321.15	0.65	W	3.3	5	SW
20250321.18	0.59	W	3.4	4	N
20250321.21	0.55	SW	3.4	4	W
20250322.00	0.52	SW	3.3	4	SW
20250322.03	0.51	SW	3.1	5	SW
20250322.06	0.53	SW	2.9	5	SW
20250322.09	0.54	SW	2.9	5	SW
20250322.12	0.52	SW	2.9	5	S
20250322.15	0.52	SW	2.9	5	E
20250322.18	0.58	W	3.0	6	SE
20250322.21	0.71	NW	3.4	6	SE
20250323.00	0.83	NW	3.7	6	SE
20250323.03	1.05	NW	4.0	8	SE
20250323.06	1.37	NW	4.3	10	SE
20250323.09	1.37	NW	4.7	10	SE
20250323.12	1.77	NW	5.0	10	SE
20250323.15	1.76	NW	5.0	10	SE
20250323.18	1.70	NW	5.0	9	SE
20250323.21	1.62	NW	4.8	9	SE
20250324.00	1.56	NW	4.7	10	SE
20250324.03	1.53	NW	4.6	10	SE
20250324.06	1.56	NW	4.6	10	SE
20250324.09	1.55	NW	4.6	10	SE
20250324.12	1.49	NW	4.6	9	SE

**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.

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