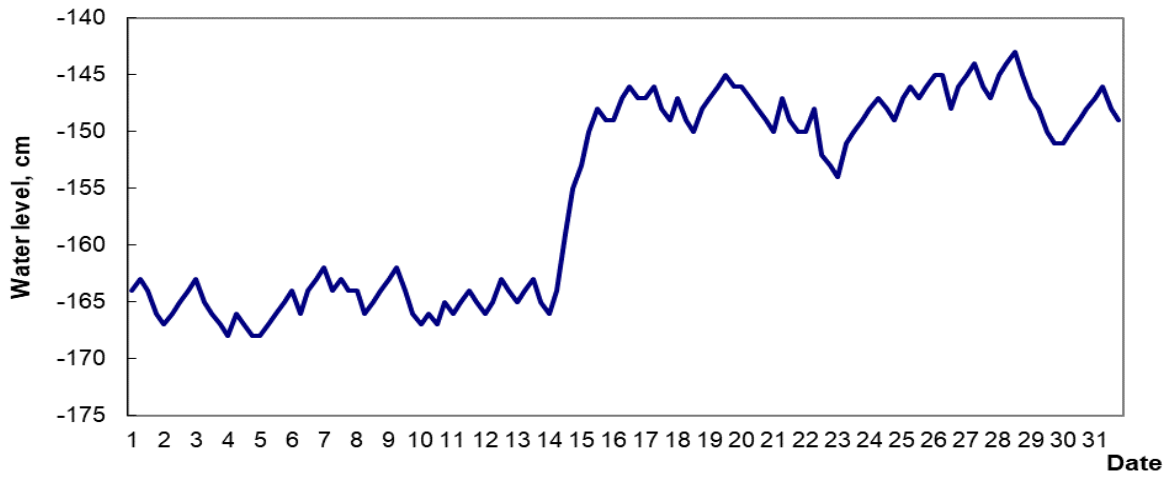
MINISTRY OF ECOLOGY AND NATURAL RESOURCES OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»

RESEARCH CENTER

OVERVIEW OF UP SURGE AND DOWN SURGE EVENTS in May 2026

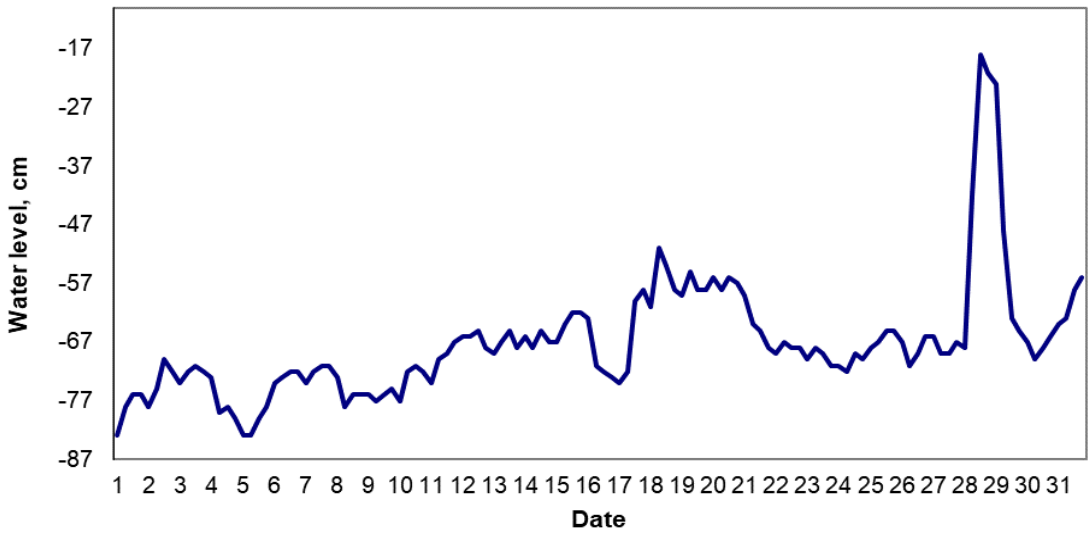
Kulaly



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
14-15.05.2026	18		N	7

- On 14-15 May, a sea level rise by 18 cm was observed from minus 29.66 m BS to minus 29.48 m BS. The wind speed reached 7 m/s, predominantly from the north;

Peshnoy



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
17.05.2026	16		E	10
28.05.2026	50		SW	18

- On 17 May, a sea level rise by 16 cm was observed from minus 28.74 m BS to minus 28.58 m BS. The wind speed reached 10 m/s, predominantly from the east;

- On 28 May, a sea level rise by 50 cm was observed from minus 28.68 m BS to minus 28.18 m BS. The wind speed reached 18 m/s, predominantly from the southwest;

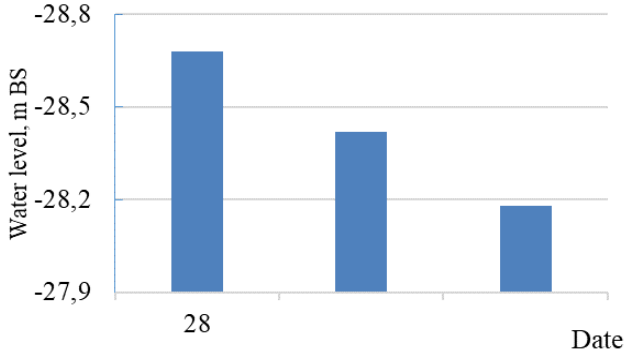
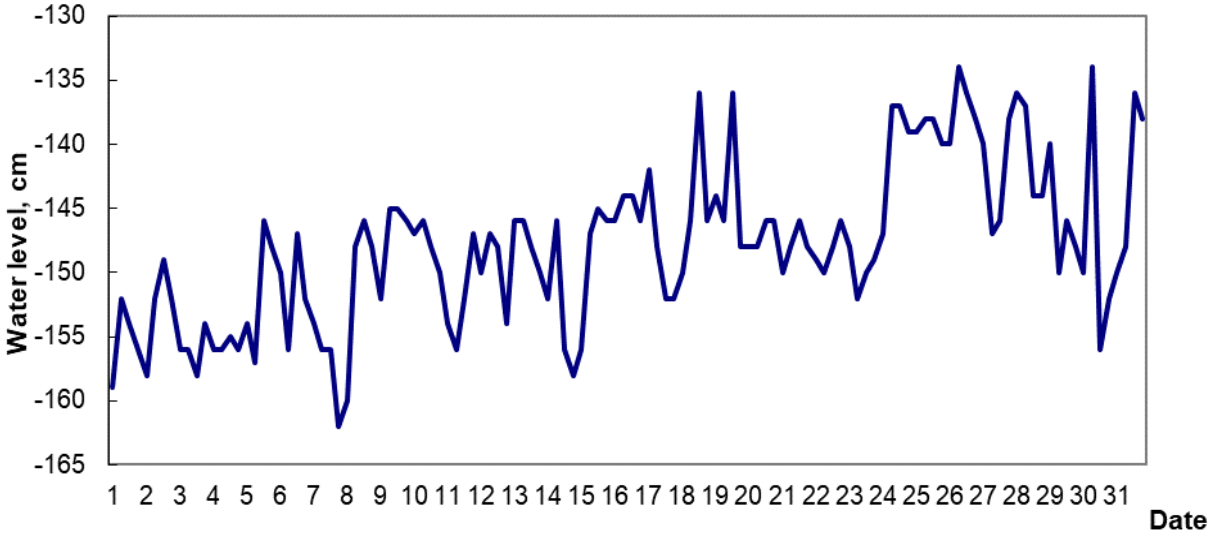


Figure 1. Graph of sea level changes in Peshnoy on May 28, 2026.

Fort-Shevchenko



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
07-08.05.2026	16		SW	9
17-18.05.2026	16		S	4
23-24.05.2026	15		ENE	5
30.05.2026	16		NW	5

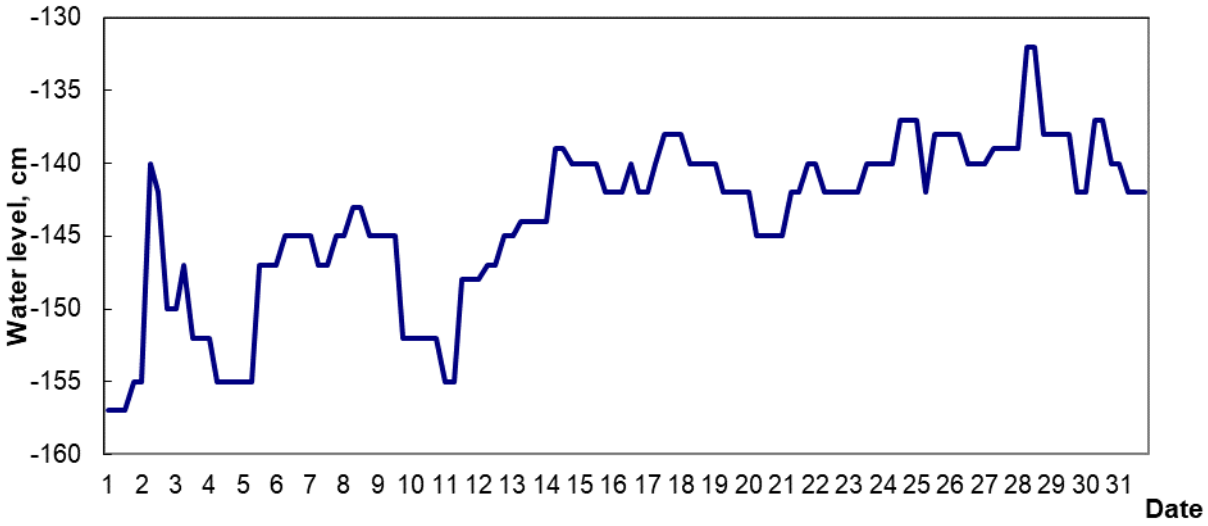
- On 07-08 May, a sea level rise by 16 cm was observed from minus 29.62 m BS to minus 29.46 m BS. The wind speed reached 9 m/s, predominantly from the southwest;

- On 17-18 May, a sea level rise by 16 cm was observed from minus 29.52 m BS to minus 29.36 m BS. The wind speed reached 4 m/s, predominantly from the south;

- On 23-24 May, a sea level rise by 15 cm was observed from minus 29.52 m BS to minus 29.37 m BS. The wind speed reached 5 m/s, predominantly from the east northeast;

- On 30 May, a sea level rise by 16 cm was observed from minus 29.50 m BS to minus 29.34 m BS. The wind speed reached 5 m/s, predominantly from the northwest;

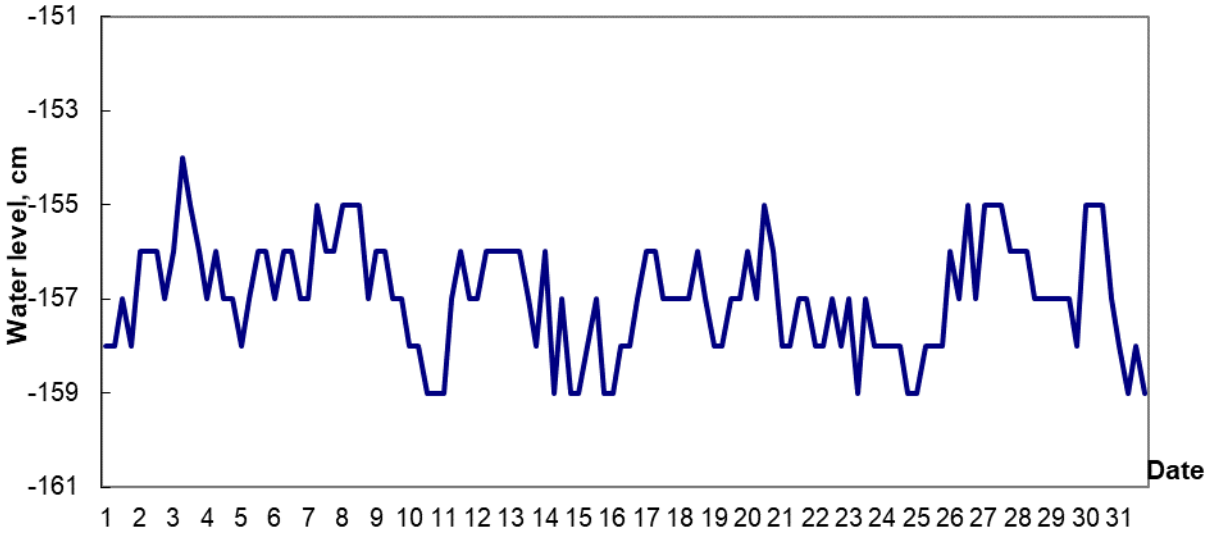
Saura



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
02.05.2026	15		SE	15

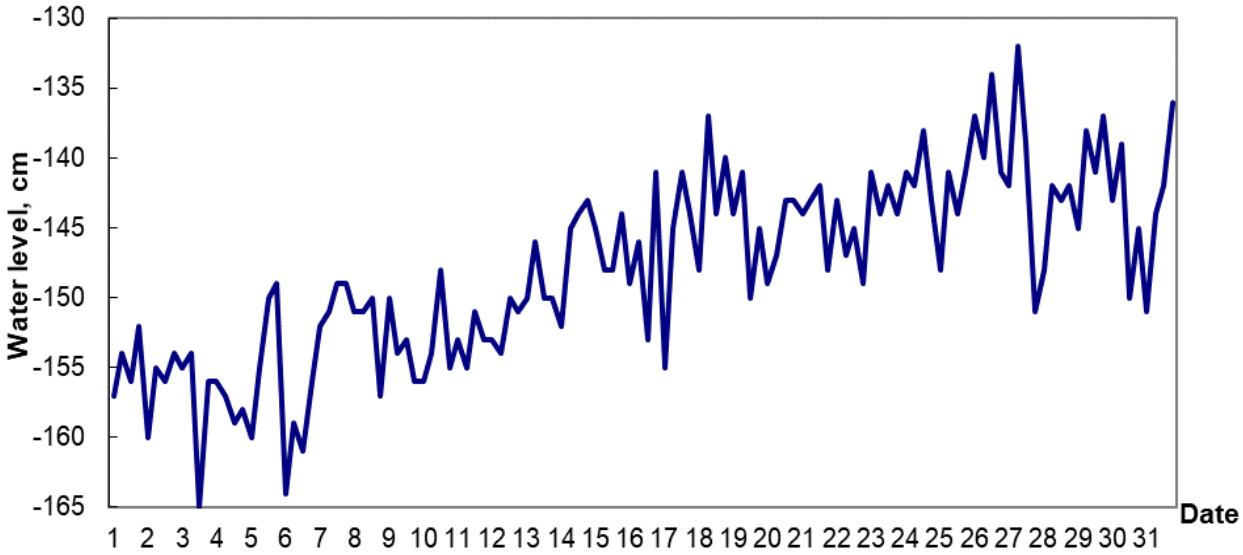
- On 02 May, a sea level rise by 15 cm was observed from minus 29.55 m BS to minus 29.40 m BS. The wind speed reached 15 m/s, predominantly from the southeast;

Peschany



The runup and surge level fluctuations did not exceed 5 cm. The sea level change during the month varied from minus 29.59 m BS to minus 29.54 m BS.

Aktau



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
05-06.05.2026		15	W, NW	5
27.05.2026		19	W	8
31.05.2026	15		SE	4

- On 05-06 May, a sea level fall by 15 cm was observed from minus 29.49 m BS to minus 29.64 m BS. The wind speed reached 5 m/s, predominantly from the west, northwest;

- On 27 May, a sea level fall by 19 cm was observed from minus 29.32 m BS to minus 29.51 m BS. The wind speed reached 8 m/s, predominantly from the west;

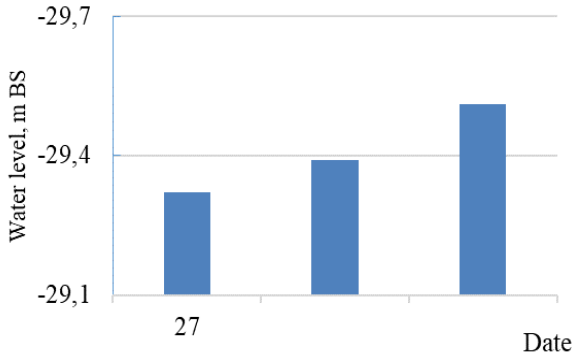
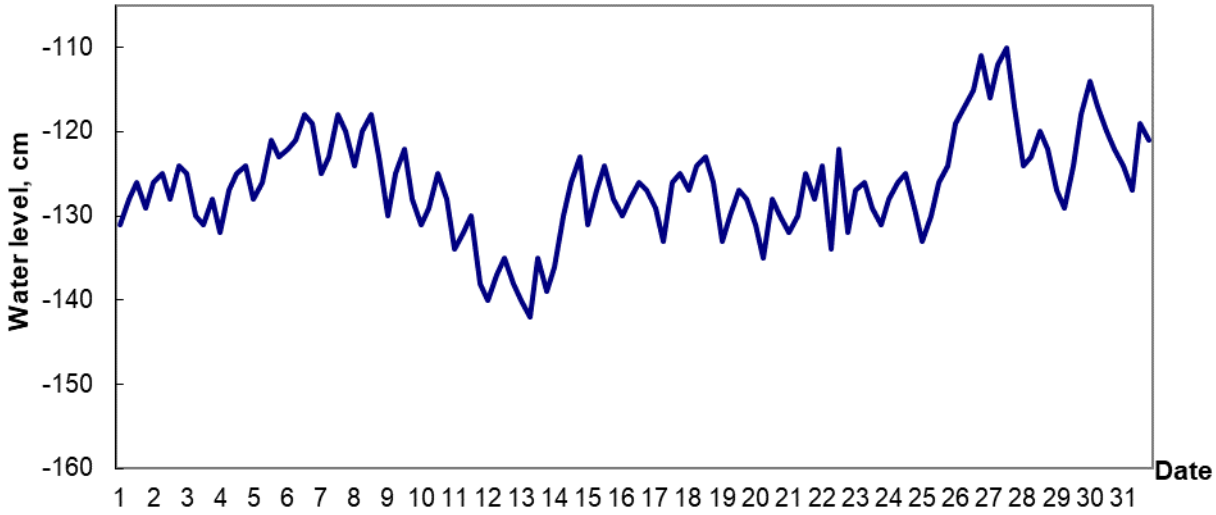


Figure 2. Graph of sea level changes in Aktau on May 27, 2026.

- On 31 May, a sea level rise by 15 cm was observed from minus 29.51 m BS to minus 29.36 m BS. The wind speed reached 15 m/s, predominantly from the southeast;

Fetisovo



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
13-14.05.2026	23		SE	8
25-26.05.2026	22		E	9

- On 13-14 May, a sea level rise by 23 cm was observed from minus 29.39 m BS to minus 29.23 m BS. The wind speed reached 8 m/s, predominantly from the southeast;

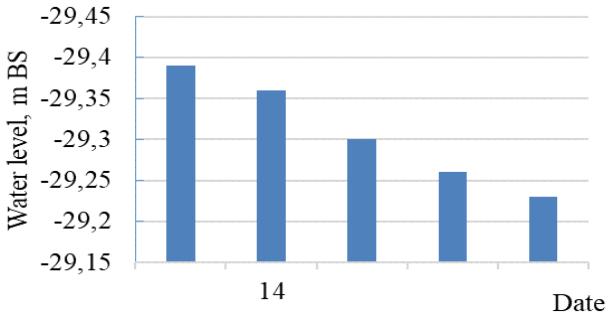


Figure 3. Graph of sea level changes in Fetisovo on May 13-14, 2026

- On 25-26 May, a sea level rise by 22 cm was observed from minus 29.33 m BS to minus 29.11 m BS. The wind speed reached 9 m/s, predominantly from the east;

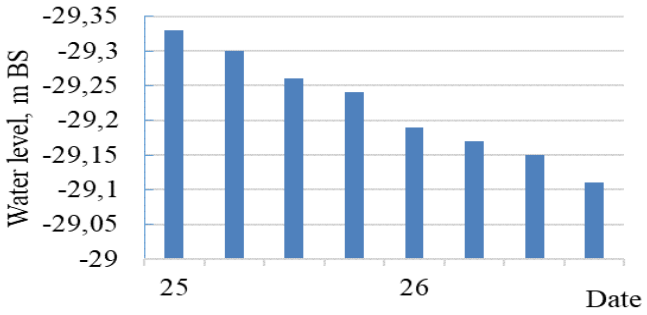


Figure 4. Graph of sea level changes in Fetisovo on May 25-26, 2026

Note:

Analysis of the Zhanbay upsurge and downsurge events was not performed due to the receipt of hydrometeorological data with gaps.

From May 22, 2026, starting at 12:00 GMT (UTC), meteorological and hydrological observations at the Kulaly island have been temporarily suspended (Order No. 01-04/15 dated January 23, 2026).

STORM SURGE HAZARD CRITERIA FOR THE NORTHEASTERN COASTLINE

	Rise/Fall, cm**	Characteristic***	Consequences
up surge	49	Critical	flooded coast area to 5 km
	60	Danger	flooding and flooding of dams and buildings up to 10 km
	109	Especially danger	flooding of the coast for more than 10 km, destruction of dams and buildings
down surge	-46	Critical	worsening navigation conditions for small ships
	-60	Danger	worsening of navigation conditions for small and medium-sized ships
	-104	Especially danger	ships would be aground

Note:

The calculated characteristics were obtained using the hydrodynamic module of the MIKE 21 Flow Model, adapted in RSE "Kazhydromet" to the conditions of the Caspian Sea.

***At definition of characteristic marks local conditions were considered.*

****Critical – 50 % frequency, danger – 25 % frequency, especially danger– 2 % frequency. The calculation was carried out for the period 1940-2024 according to the data of Peshnoy station.*

BS – Baltic System

The bulletin was compiled by the Department of Hydrometeorological Research of the Caspian Sea

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