

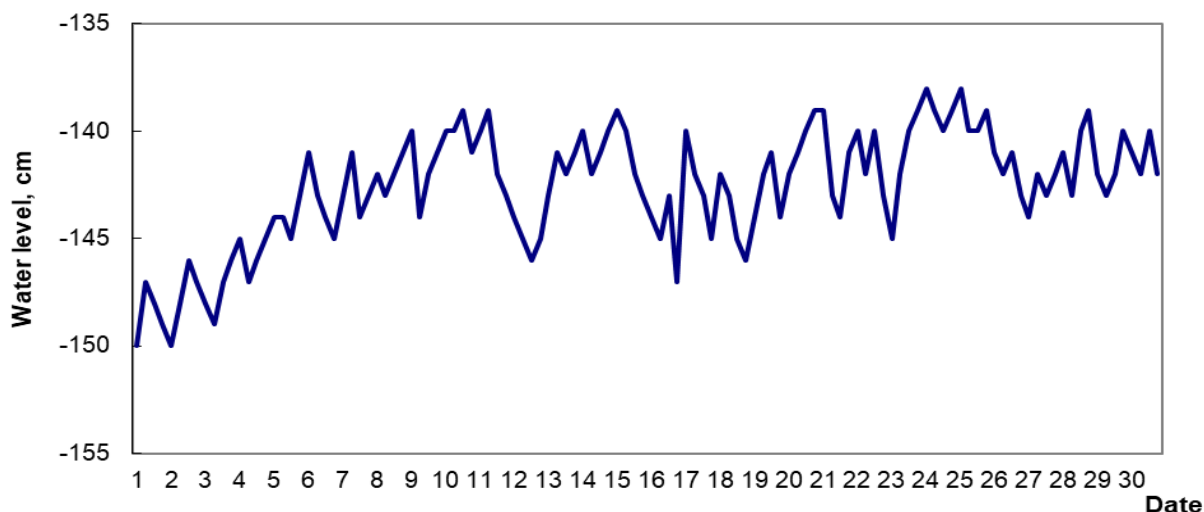


MINISTRY OF ECOLOGY AND NATURAL RESOURCES
OF THE REPUBLIC OF KAZAKHSTAN
RSE «KAZHYDROMET»

RESEARCH CENTER

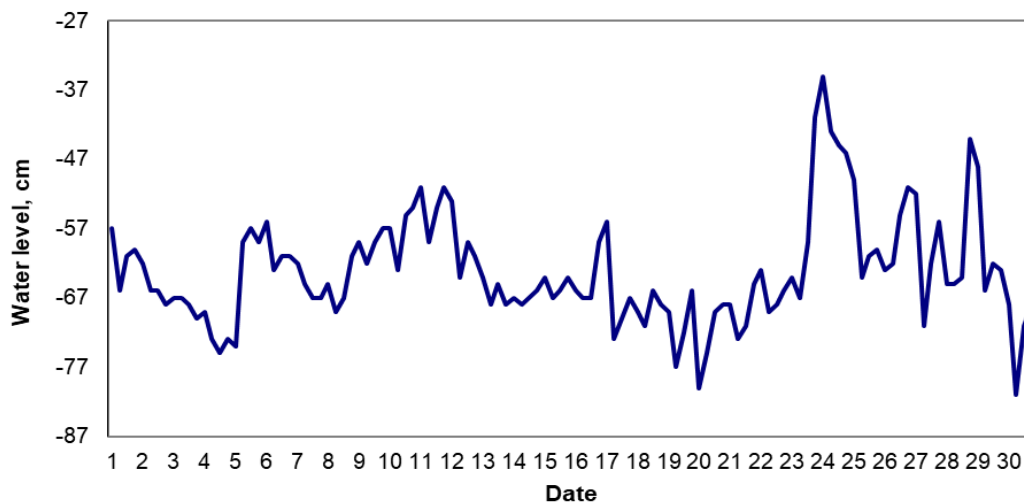
OVERVIEW OF UP SURGE AND DOWN SURGE EVENTS
in June 2026

Kulaly



The runup and surge level fluctuations did not exceed 12 cm. The sea level change during the month varied from minus 29.50 m BS to minus 29.38 m BS.

Peshnoy



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
05.06.2026	17		SW	6
17.06.2026		17	W	2
23-24.06.2026	32		SW	10
26-27.06.2026		20	SW, W	10
28.06.2026	20		SSW	8
29-30.06.2026		19	NW ,W	8

- On 05 June, a sea level rise by 17 cm was observed from minus 28.74 m BS to minus 28.57 m BS. The wind speed reached 6 m/s, predominantly from the southwest;

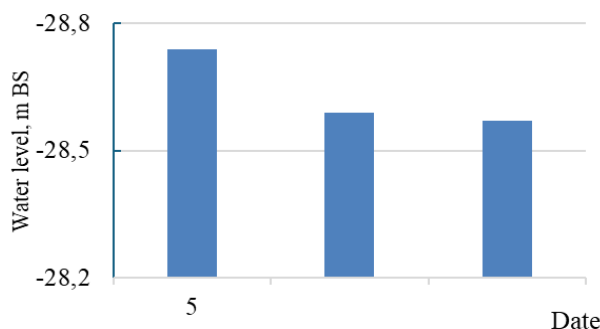


Figure 1. Graph of sea level changes in Peshnoy on June 05, 2026.

- On 17 June, a sea level fall by 17 cm was observed from minus 28.56 m BS to minus 28.73 m BS. The wind speed reached 2 m/s, predominantly from the west;

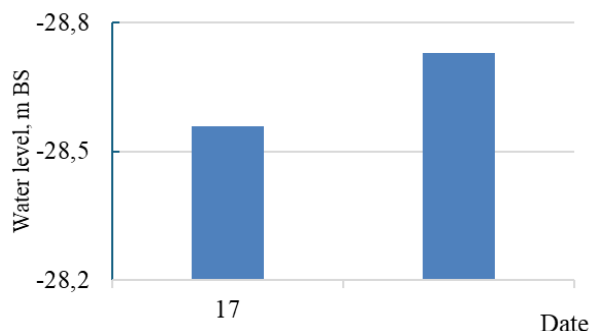


Figure 2. Graph of sea level changes in Peshnoy on June 17 28, 2026.

- On 23-24 June, a sea level rise by 32 cm was observed from minus 28.67 m BS to minus 28.35 m BS. The wind speed reached 10 m/s, predominantly from the southwest;

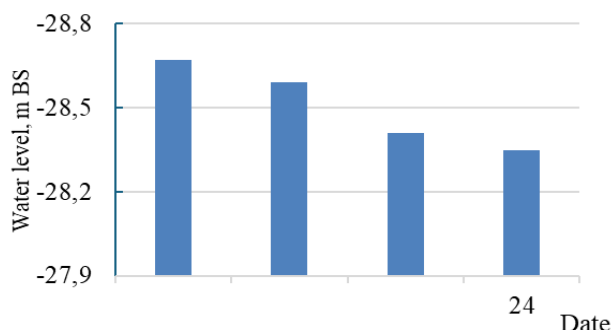


Figure 3. Graph of sea level changes in Peshnoy on June 23-24, 2026.

- On 26-27 June, a sea level fall by 20 cm was observed from minus 28.51 m BS to minus 28.71 m BS. The wind speed reached 10 m/s, predominantly from the southwest, west;

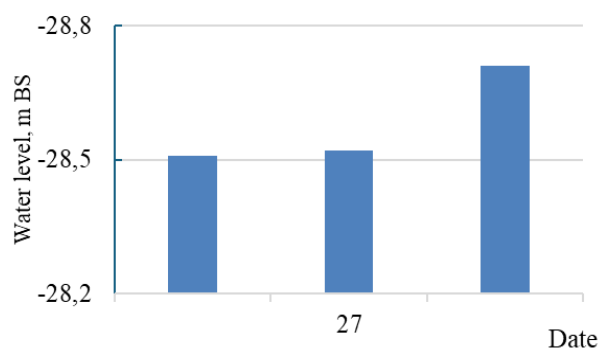


Figure 4. Graph of sea level changes in Peshnoy on June 26-27, 2026.

- On 28 June, a sea level rise by 20 cm was observed from minus 28.64 m BS to minus 28.44 m BS. The wind speed reached 8 m/s, predominantly from the south, southwest;

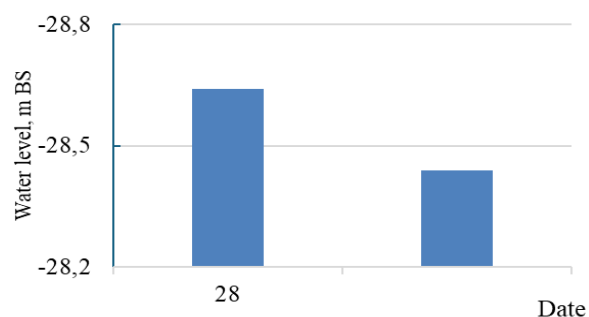


Figure 5. Graph of sea level changes in Peshnoy on June 28, 2026.

- On 29-30 June, a sea level fall by 19 cm was observed from minus 28.62 m BS to minus 28.81 m BS. The wind speed reached 8 m/s, predominantly from the northwest, west;

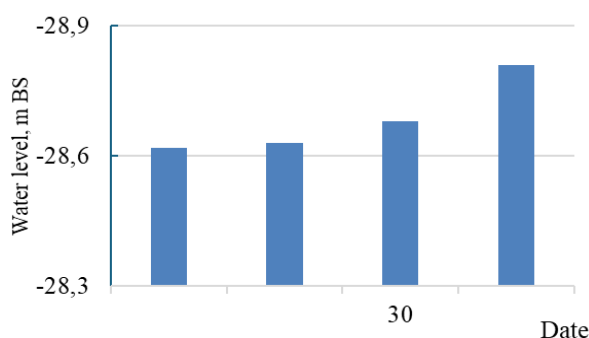
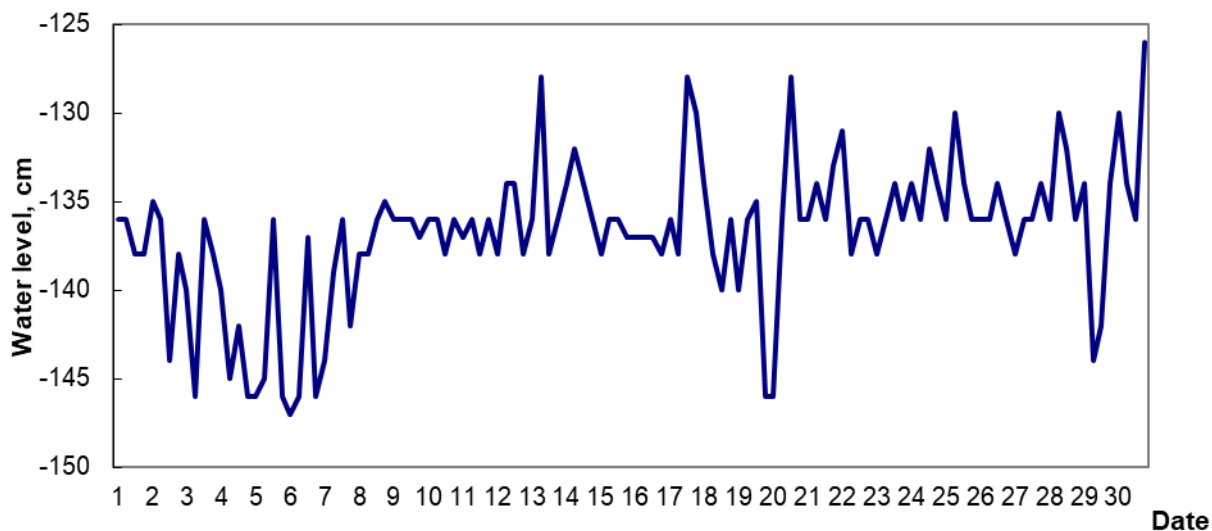


Figure 6. Graph of sea level changes in Peshnoy on June 29-30, 2026.

Fort-Shevchenko



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
20.06.2026	18		NW	2

- On 20 June, a sea level rise by 18 cm was observed from minus 29.46 m BS to minus 29.28 m BS. The wind speed reached 2 m/s, predominantly from the northwest;

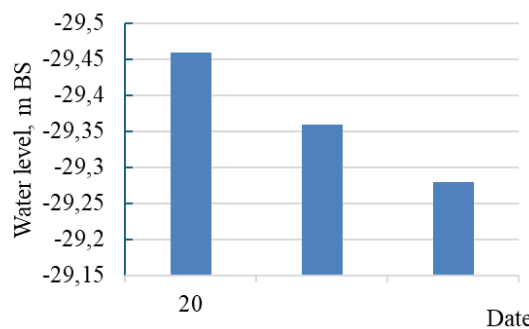
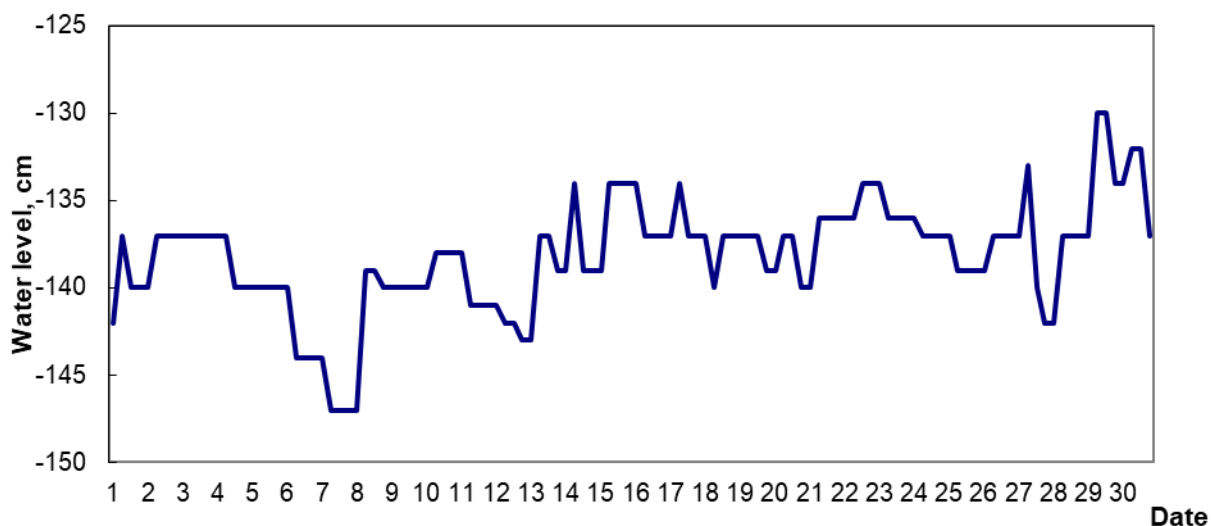


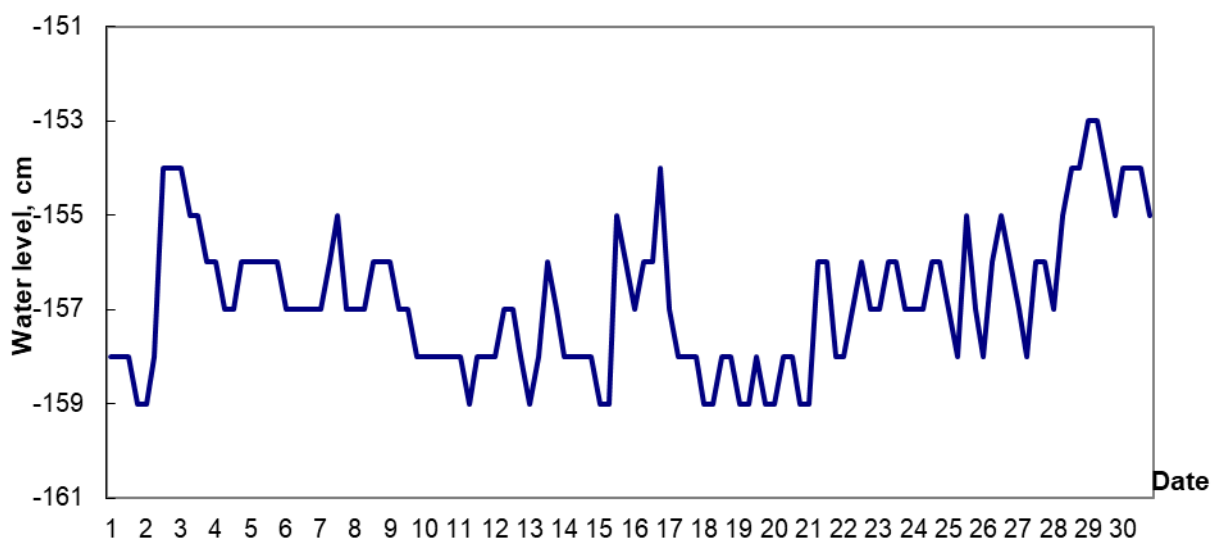
Figure 7. Graph of sea level changes in Fort-Shevchenko on June 20, 2026.

Saura



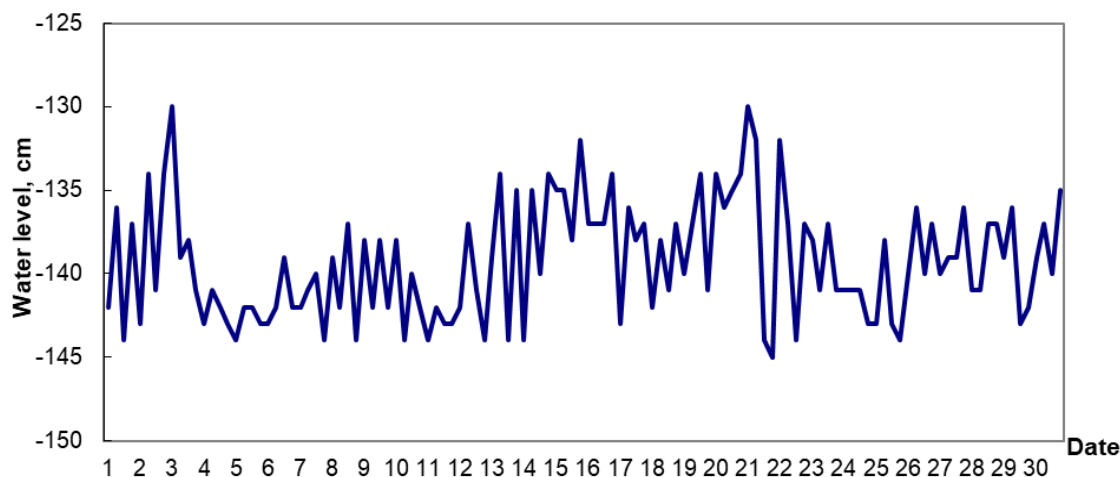
The runup and surge phenomena were not recorded. The sea level change during the month varied from minus 29.47 m BS to minus 29.30 m BS.

Peschany



The runup and surge level fluctuations did not exceed 6 cm. The sea level change during the month varied from minus 29.59 m BS to minus 29.53 m BS.

Aktau



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
21.06.2026		15	NW, WNW	7

- On 21 June, a sea level fall by 15 cm was observed from minus 29.30 m BS to minus 29.45 m BS. The wind speed reached 7 m/s, predominantly from the northwest, west northwest;

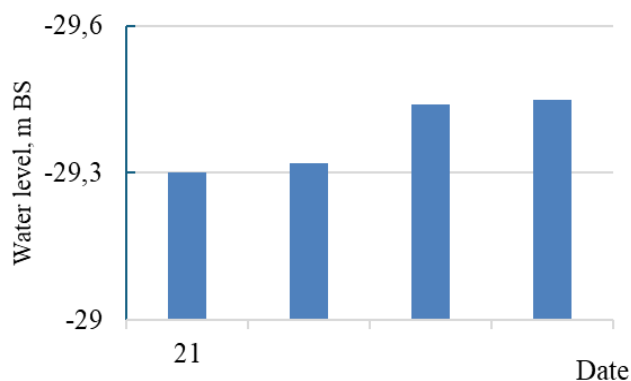
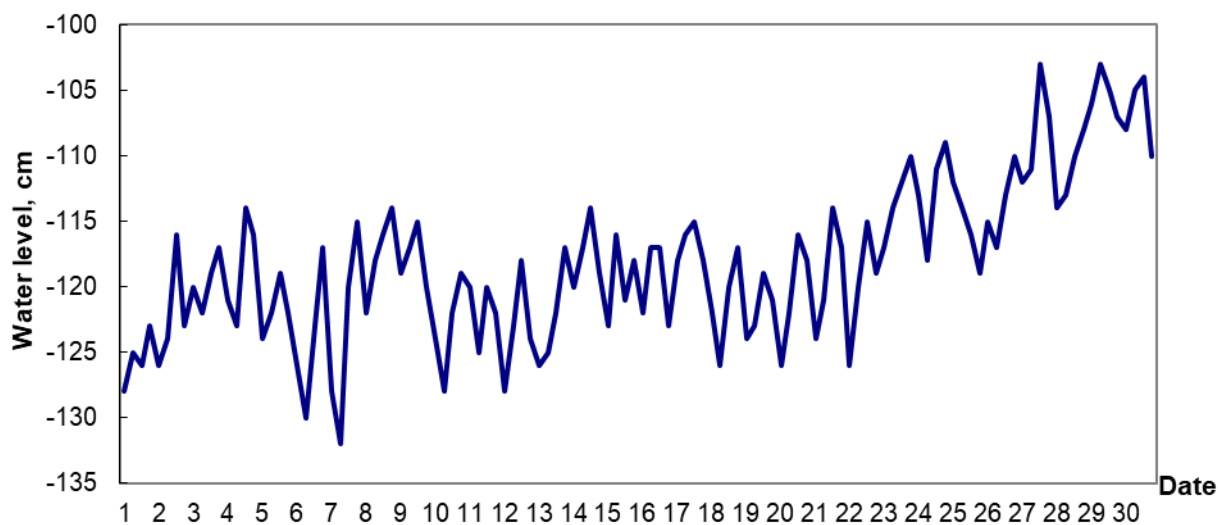


Figure 8. Graph of sea level changes in Aktau on June 21, 2026.

Fetisovo



Date	Level rise, cm	Level fall, cm	Prevailing wind direction, rhumb	Maximum wind speed, m/s
06-07.06.2026		15	N	8

- On 06-07 June, a sea level fall by 15 cm was observed from minus 29.17 m BS to minus 29.32 m BS. The wind speed reached 8 m/s, predominantly from the south;

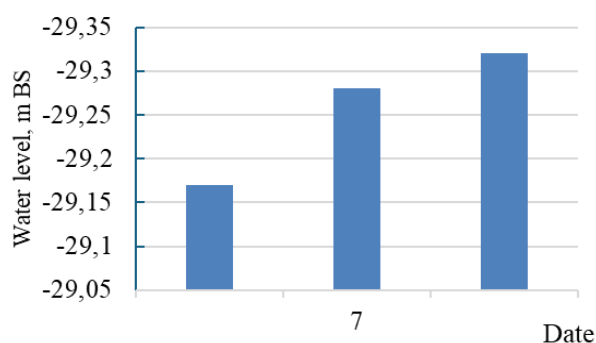


Figure 9. Graph of sea level changes in Fetisovo on June 06-07, 2026

Note:

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

From June 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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