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

SCIENTIFIC RESEARCH CENTER

CASPIAN SEA WEEKLY BULLETIN №45

FORECAST OF LEVEL AND SURGE PHENOMENA IN THE CASPIAN SEA ON NOVEMBER 5 - 10, 2026

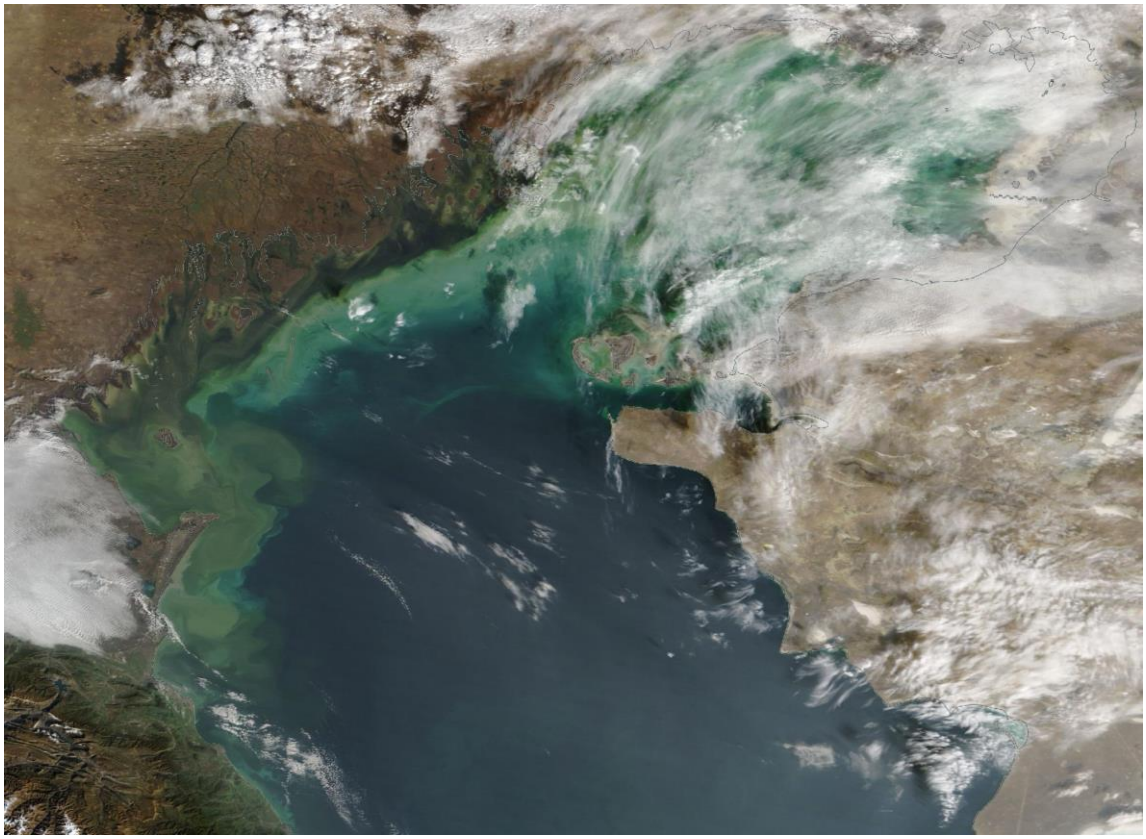


Fig.1 Space image of the Caspian Sea, November 3, 2026 (NASA/GSFC)

SURGERY PHENOMENA.

*In the Middle Caspian Sea, wind setdown and surge phenomena are expected at Kuryk, Fetisovo, and Makhachkala stations: sea-level fluctuations of up to 18 cm at **Kuryk**, ranging between −29.79 and −29.61 m; up to 17 cm at **Fetisovo**, ranging between −29.43 and −29.26 m; and up to 20 cm at **Makhachkala**, ranging between −29.22 and −29.02 m in the Baltic height system.*

*In the Northern Caspian Sea, wind setdown and surge phenomena are expected at **Tyuleniy** station: sea-level fluctuations of up to 16 cm, ranging between −29.31 and −29.15 m in the Baltic height system.*

Middle part of the Caspian Sea

SEA LEVEL.

In the period on November 05-10, the sea level is expected to fluctuate around the mark of minus 29.49 m BS. The range of fluctuations in sea level is from minus 29.02 m BS to minus 29.79 m BS. In the area of Fort Shevchenko, Fetisovo, Aktau, Saura, Peschanyi and Makhachkala sea level fluctuations will not exceed **13 cm** (Figure 2).

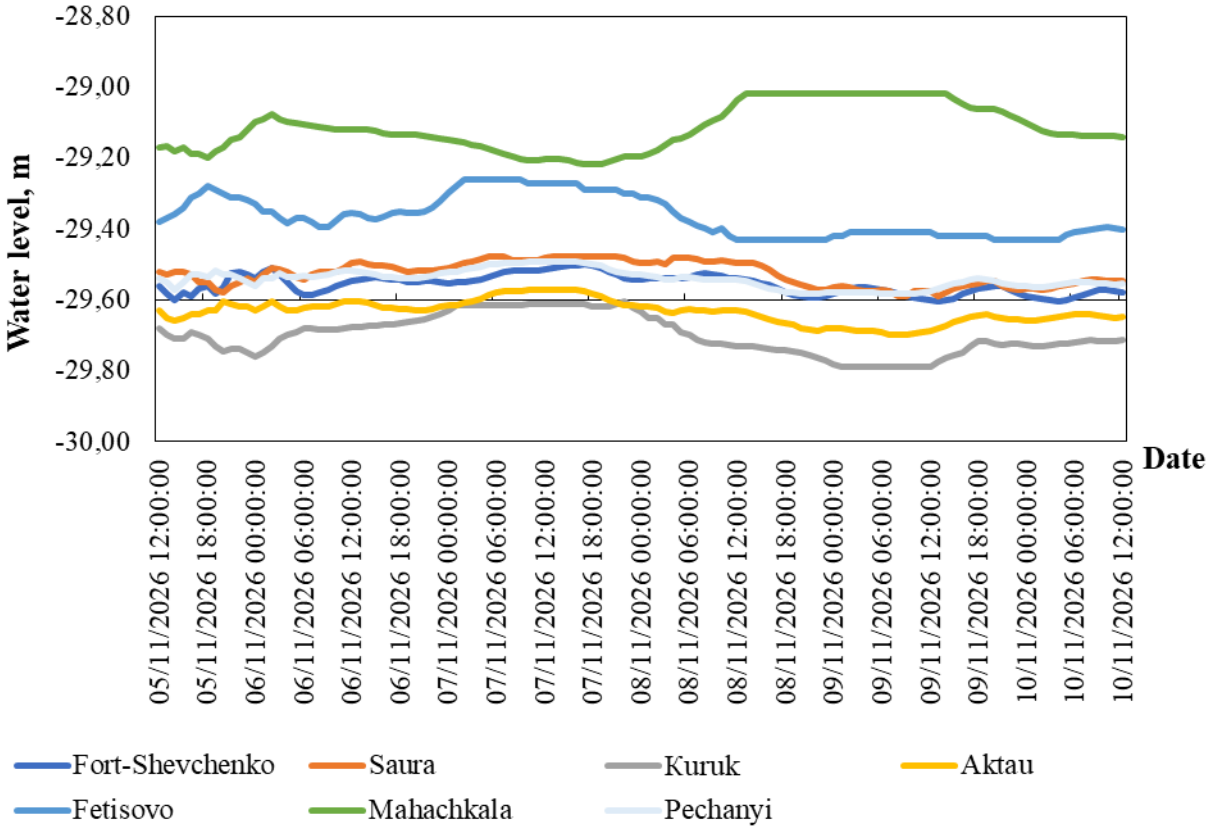


Fig .2 Forecast of sea level in the points of the Middle Caspian

Northern part of the Caspian Sea

SEA LEVEL

In the period the sea level is expected to fluctuate around the mark of minus 29.23 m BS. The range of fluctuations in sea level is from minus 28.97 m BS to minus 29.48 m BS. In the area of Kulaly *and* Peshnoy sea level fluctuations will **not exceed 13 cm** (Figure 3).

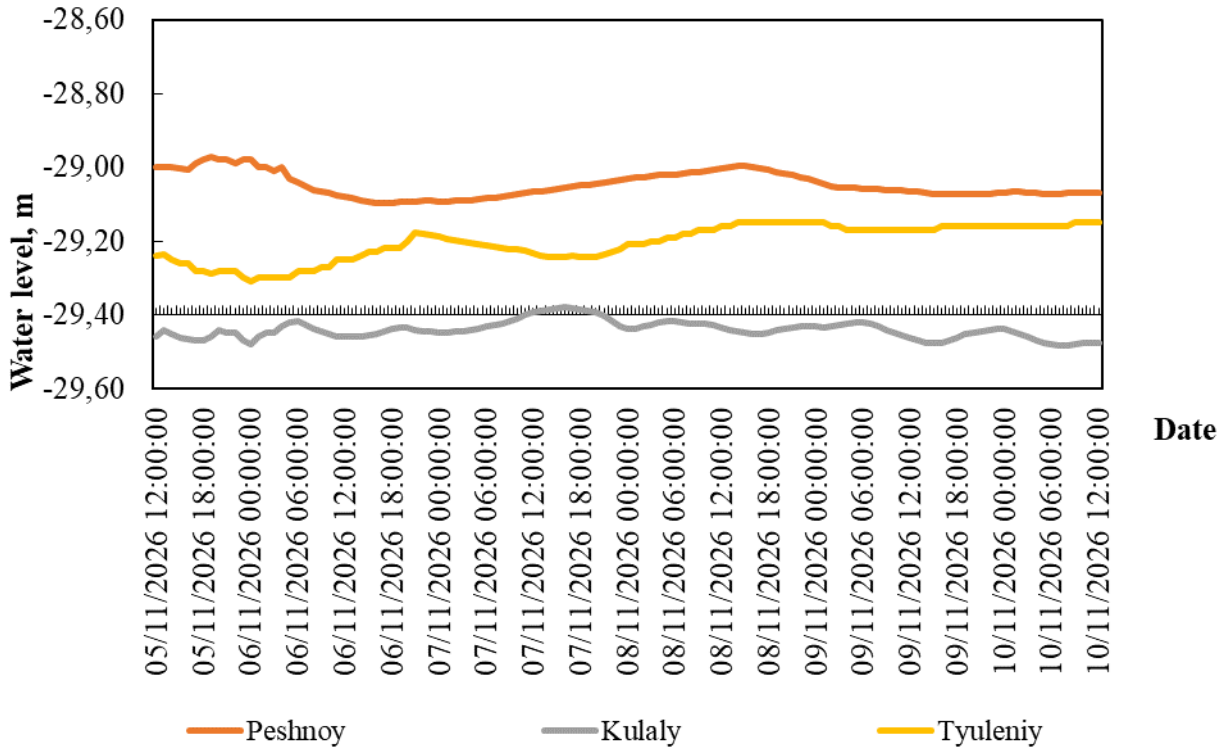


Fig .3 Forecast of sea level in the points of the North Caspian

FORECAST VALUES OF SEA LEVEL FLUCTUATIONS AT VARIOUS POINTS OF THE KAZAKHSTAN COASTLINE

Point name	Maximum		Minimum		Average
	Level, sm (m BS)	date, time, GMT*	Level, sm (m BS)	date, time, GMT*	Level, sm (m BS)
Middle Part					
Fort-Shevchenko	**-150 (-29,50)**	07/11/2026 17:00:00	**-160 (-29,60)**	09/11/2026 13:00:00	**-156 (-29,56)**
Saura	**-148 (-29,48)**	07/11/2026 21:00:00	**-159 (-29,59)**	09/11/2026 08:00:00	**-153 (-29,53)**
Kuryk	**-161 (-29,61)**	07/11/2026 22:00:00	**-179 (-29,79)**	09/11/2026 12:00:00	**-170 (-29,70)**
Aktau	**-157 (-29,57)**	07/11/2026 14:00:00	**-170 (-29,70)**	09/11/2026 08:00:00	**-163 (-29,63)**
Fetisovo	**-126 (-29,26)**	07/11/2026 02:00:00	**-143 (-29,43)**	10/11/2026 04:00:00	**-136 (-29,36)**
Peschanyi	**-149 (-29,49)**	07/11/2026 15:00:00	**-158 (-29,58)**	08/11/2026 22:00:00	**-154 (-29,54)**
Makhachkala	**-102 (-29,02)**	08/11/2026 13:00:00	**-122 (-29,22)**	07/11/2026 18:00:00	**-111 (-29,11)**
Northern Part					
Peshnoy	**-110 (-29,10)**	**-97 (-28,97)**	05/11/2026 19:00:00	**-110 (-29,10)**	06/11/2026 17:00:00
Kulaly	**-132 (-29,32)**	**-138 (-29,38)**	07/11/2026 16:00:00	**-148 (-29,48)**	10/11/2026 07:00:00
Tyuleniy	**-107 (-29,07)**	**-115 (-29,15)**	08/11/2026 14:00:00	**-131 (-29,31)**	06/11/2026 00:00:00

GMT - Greenwich Mean Time*

REVIEW

CASPIAN SEA WATER STAGE FROM OCTOBER 29 – NOVEMBER 04, 2026

In the northern part of the Caspian Sea, according to operational data from marine stations of Kazhydromet: Peshnoy, Kulaly island and Roshydromet (isl. Tyuleniy), the average sea level corresponded to minus 28.90 m BS, the maximum minus 29.01 m BS, the minimum minus 29.99 m BS.

According to the operational data of the sea stations of Kazhydromet: Fort-Shevchenko, Aktau, Fetisovo, Saura, Kuryk, Peschanyi and Roshydromet (Makhachkala), the average value of the level of the Caspian Sea, in its deep part, corresponded to minus 29.52 m BS, the maximum minus 29.02 m BS, the minimum minus 29.84 m BS.

CRITERIA OF DANGER OF THE STORM SURGES IN THE NORTHEAST COAST

	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

** The calculated characteristics were obtained using the hydrodynamic module of the MIKE 21 Flow Model, adapted in RSE "Kazgidromet" to the conditions of the Caspian Sea. Data of sea level measurements and pressure field numerical forecasting for 24 –120 hours were used in computation.*

*** 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

Address: 010000, Astana, Mangilik El Ave. 32, Tel. 2 79 83 12;
e-mail: ugmikm@meteo.kz

When using materials of the bulletin the link to RSE "Kazhydromet" is obligatory