

Fig. 2 Forecast of the Caspian Sea (Northern part)

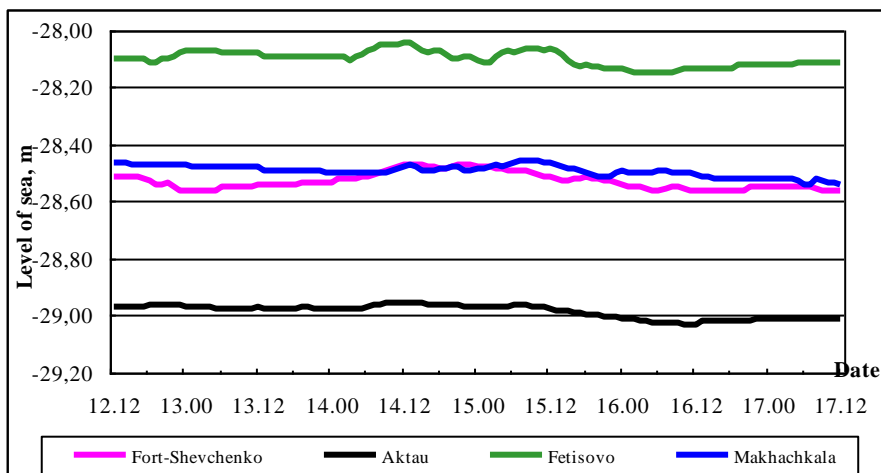


Fig. 2 Forecast of the Caspian Sea (Middle part)

It is created by Vasenina E.I.
 It is checked by Ivkina N.I.
 When using materials of the bulletin
 the link to RSO "Kazhydromet" is obligatory



Ministry of Ecology, Geology and Natural
Resources of the Republic of Kazakhstan

«Kazhydromet», RSE

Scientific Research Center
Caspian Sea Weekly Bulletin №19

13 May, 2022



Fig.1 Space images of the Caspian Sea, 10 May, 2022, NAGA/GSFC

Review

Position of the water level from, 05-11 May, 2022

Average value of the Caspian Sea level in its northern part according to marine stations and posts of the Kazhydromet: Peshnoy, Zhanbay, Kulaly Island corresponded to a mark minus 28,43m, maximum - a minus of 27,87m, minimum – a minus of 28,61 m.

In the Middle part of the Caspian Sea, according to Fort Shevchenko, Aktau, Fetisovo and Makhachkala (Roshydromet) average value of the sea level corresponded to a mark minus 28,50m, maximum – a minus of 28,06m, minimum - a minus of 29,00m.

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

Address: 050022, Almaty, Abay Ave. 32, Tel. 2 55 84 06;

e-mail: caspian_almaty@mail.ru, kaspy@meteo.kz

FORECAST* *of the water level, 12-17 May, 2022*

In the Northern part of the Caspian Sea level fluctuation about a mark minus 28,20m is expected. At the storm surges sea level increasing to a mark minus 27,73m and its decrease to a mark minus 28,66m is possible.

In the Middle part of the Caspian Sea level fluctuation about a mark minus 28,53m with the maximum increasing to a mark minus 28,04m and the minimum recession to a mark minus 29,03m is expected.

Criteria of danger of the storm surges in the northeast coast

Water Level,		Characte- ristic***	Consequences
m**	sm, above sea level minus of 28,00 m		
-27,50	50	Critical	Flooded coast area to 10 km
-27,35	65	Danger	Flooded and waterlogged dams and constructions
-26,90	110	Especially danger	More than 15 km flooded coastal area, destroyed dams and constructions
-28,50	-50	Critical	Worsening of navigation conditions
-28,65	-65	Danger	Worsening of navigation conditions for not great ships
-29,00	-100	Especially danger	Ships would be aground

** The characteristics were computed by Hydrodynamic module MIKE 21 of Danish Hydraulic Institute. RSE "KAZHYDROMET" has the module adapted to Caspian Sea conditions. Data of sea level measurements (Fig.1) 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 1940-2020 according to the data of Peshnoy station.*

**Forecast values of the sea level for various region of the Caspian Sea,
12-17 May, 2022**

Name point	Maximum		Minimum		Average
	Level, sm (m BS)	date, time, GMT*	Level, sm (m BS)	дата, время, СГВ*	Level, sm (m BS)
<i>Northern Part</i>					
Zhanbay	-12 (-28,12)	2022/05/16 03:00:00	-38 (-28,38)	2022/05/12 12:00:00	-26 (-28,26)
Peshnoy	27 (-27,73)	2022/05/16 14:00:00	6 (-27,94)	2022/05/12 12:00:00	19 (-27,81)
Karaton	16 (-27,84)	2022/05/12 20:00:00	-7 (-28,07)	2022/05/17 01:00:00	8 (-27,92)
Kalamkas	12 (-27,88)	2022/05/15 03:00:00	-23 (-28,23)	2022/05/16 07:00:00	-2 (-28,02)
Kulaly Island	-50 (-28,50)	2022/05/15 19:00:00	-62 (-28,62)	2022/05/16 20:00:00	-56 (-28,56)
Gyuleny Island	-61 (-28,61)	2022/05/12 12:00:00	-66 (-28,66)	2022/05/14 05:00:00	-64 (-28,64)
<i>Middle Part</i>					
Fort- Shevchenko	-47 (-28,47)	2022/05/14 12:00:00	-56 (-28,56)	2022/05/12 23:00:00	-53 (-28,53)
Aktau	-95 (-28,95)	2022/05/14 10:00:00	-103 (-29,03)	2022/05/16 09:00:00	-98 (-28,98)
Fetisovo	-4 (-28,04)	2022/05/14 12:00:00	-14 (-28,14)	2022/05/15 16:00:00	-10 (-28,10)
Makhachkala	-45 (-28,45)	2022/05/15 09:00:00	-54 (-28,54)	2022/05/17 06:00:00	-49 (-28,49)

GMT* - Greenwich Mean Time