





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



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Fig.1 Space images of the Caspian Sea, 27 June, 2022, NAGA/GSFC

## Review

#### Position of the water level from, 23-29 June, 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 28,48m, maximum - a minus of 28,12m, minimum – a minus of 28,65m.

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 28,15m, minimum - a minus of 28,99m.

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### FORECAST<sup>\*</sup> of the water level, 30 June, 05 July, 2022

In the Northern part of the Caspian Sea level fluctuation about a mark a minus 28,35m is expected. At the storm surges sea level increasing to a mark minus 27,85m and its decrease to a mark minus 28,63m is possible.

In the Middle part of the Caspian Sea level fluctuation about a mark minus 28,62m with the maximum increasing to a mark minus 28,34m and the minimum recession to a mark minus 28,93m is expected.

Water Level,		Characte-	Consequences	
m**	sm, above sea level minus of 28,00 m	ristic***		
-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	

#### Criteria of danger of the storm surges in the northeast coast

\* 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, 30 June, 05 July, 2022

Name point	Maximum		Minimum		Average				
	Level,	date, time,	Level,	дата, время,	Level,				
	sm	$\mathrm{GMT}^*$	sm	$C\Gamma B^*$	sm				
	(m BS)		(mBS)		(mBS)				
Northern Part									
	-10	2022/07/01	-16	2022/07/03	-13				
Zhanbay	(-28,10)	20:00:00	(-28,16)	09:00:00	(-28,13)				
Peshnoy	-50	2022/07/03	-60	2022/06/30	-54				
-	(-28,50)	09:00:00	(-28,60)	12:00:00	(-28,54)				
Karaton	15	2022/07/04	-35	2022/07/03	-15				
	(-27,85)	19:00:00	(-28,35)	03:00:00	(-28,15)				
Kalamkas	6	2022/07/03	-36	2022/07/02	-22				
	(-27,94)	19:00:00	(-28,36)	05:00:00	(-28,22)				
Kulaly	-53	2022/06/30	-63	2022/07/02	-59				
Island	(-28,53)	12:00:00	(-28,63)	23:00:00	(-28,59)				
	-41	2022/07/01	-57	2022/07/03	-49				
Fyuleny Island	(-28,41)	14:00:00	(-28,57)	05:00:00	(-28,49)				
Middle Part									
Fort-	-48	2022/07/03	-62	2022/07/02	-54				
Shevchenko	(-28,48)	20:00:00	(-28,62)	19:00:00	(-28,54)				
Aktau	-86	2022/07/03	-93	2022/07/04	-90				
	(-28,86)	20:00:00	(-28,93)	17:00:00	(-28,90)				
Fetisovo	-56	2022/07/04	<b>-66</b>	2022/07/02	-62				
	(-28,56)	10:00:00	(-28,66)	09:00:00	(-28,62)				
Makhachkala	-34	2022/07/01	-51	2022/07/04	-43				
	(-28,34)	03:00:00	(-28,51)	19:00:00	(-28,43)				

GMT\* - Greenwich Mean Time