

# COORDINATING COMMITTEE ON HYDROMETEOROLOGY AND POLLUTION MONITORING OF THE CASPIAN SEA (CASPCOM)

Information bulletin on the state of the Caspian Sea level  
No.12  
12 September 2016

In accordance with the data received from the National Hydrometeorological Organizations of the Caspian littoral states (NMHS) published in Bulletin of Hydrometeorological Centre of Russia No. 36 from 4 May 2016, the mean level of the Caspian Sea in 2015 fell by 24 cm as compared to 2014 and measured  $-27.98 \text{ m}^1$ .

According to the forecast of the Hydrometeorological Centre of Russia published in that bulletin, it was expected that the mean level of the Caspian Sea in the first half of 2016 would be by 10 cm lower than in the same period of the previous year, and the seasonal increase of the mean level from January to June would make 35 cm.

The data submitted by the NMHSs to prepare this bulletin for the posts covering the whole sea area reveal that the mean level<sup>2</sup> in the first half of 2016 was by 7 cm lower than last year, and the seasonal increase from January to June 2016 made 35 cm, which corresponds to the forecast data.

By the forecast of the Hydrometeorological Centre of Russia, the mean Caspian Sea level in 2016 will remain at the same elevation as in 2015  $\pm 5 \text{ cm}$ , that is will measure approximately  $-28.0 \text{ m B.S.}$  The stabilization of the Caspian Sea level is due to the high flood in the Volga river observed in the current year (Fig. 1). By the estimates of water discharges from Volgograd HPS, the river runoff in Q2 of 2016 was almost by 2 times higher than last year and by 16% higher than the mean value for the past 30 years.

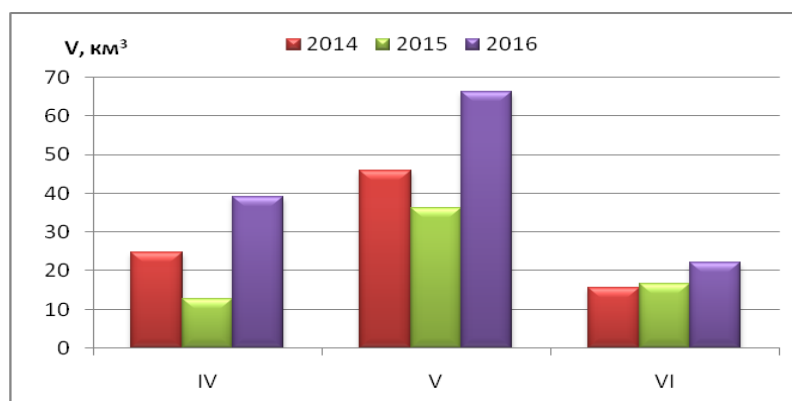
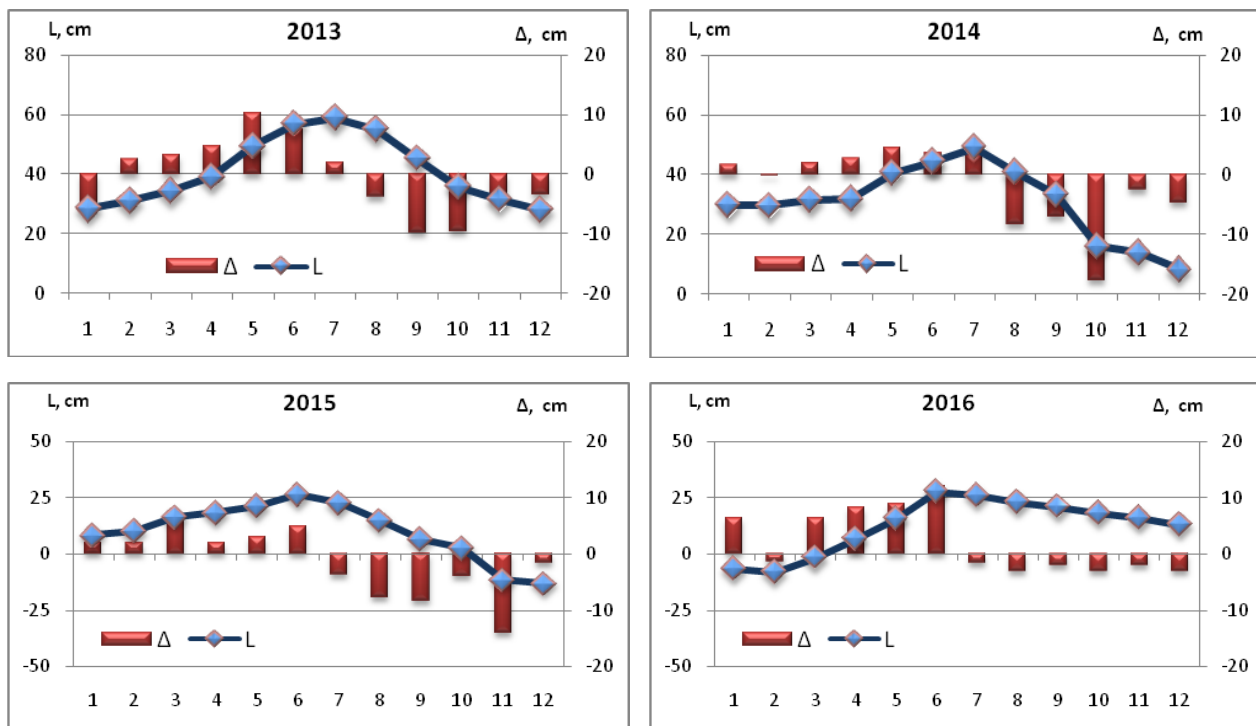


Fig. 1. Water discharges from Volgograd HPS ( $V, \text{ km}^3$ ) throughout April - June 2014 - 2016.

<sup>1</sup> To calculate the mean value of the sea level for the whole sea water area we have used observations data at "century" posts: Baku, Neft Dashlary (Oil Rocks), Makhachkala, Fort-Shevchenko, Guvlymayak (Kuuli-Mayak), Turkmenbashi (Krasnovodsk), Garabogaz (Kara-Bogaz-Gol).

<sup>2</sup> To calculate the mean level in this case we have used observations data at 4 "century" posts: Makhachkala, Fort-Shevchenko, Guvlymayak (Kuuli-Mayak), Turkmenbashi (Krasnovodsk)

The seasonal run of the Caspian Sea level in the current year differs greatly from the two previous low-water years (Fig. 2) It shows that the interannual sea level variations shift from negative to positive, which is in compliance with the experimental Caspian Sea level forecast up to 2025, based on analysis and modelling of the long-term time series given in the General Catalogue of the Caspian Sea Level<sup>3</sup>.



**Fig.2.** Seasonal variations of the mean Caspian Sea level (L, cm) and its monthly increment ( $\Delta$ , cm) in 2013 -2016. The expected sea level change for the 2nd half of 2016 is forecast based on the assumption that the average rate of sea level fall would make 2-3 cm a month.

With account of the actual water content in the Volga river in the first half of 2016 one could suppose that the rate of seasonal sea level fall in the second half of 2016 will measure about 2-3 cm a month (Fig. 2). If we base upon these figures, then the mean level of the Caspian Sea in 2016 will rise by 5-7 cm as compared to the previous year and will make -27.93...-27.91 cm B.S. at absolute marks.

*This bulletin is intended for the authorities, enterprises and organizations and coastal communities as well as for all whose activities are connected with the Caspian Sea. Its preparation became possible only due to the cooperation of hydrometeorological organizations of the Caspian littoral states. The data of the General Catalogue of the Caspian Sea level elaborated under CASPCOM umbrella were used to compile the bulletin*

<sup>3</sup> The forecast was published in Annex to Information Bulletin on the State of the Caspian Sea Level No 10 dated 5 October 2015.