

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

**Information bulletin on the state of the Caspian Sea level
No.11
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The Bulletin on the state of the Caspian Sea level is issued twice a year in accordance with the recommendations of CASPCOM and is a joint product of hydrometeorological services of the five Caspian littoral states.

In the second half of 2015 the Caspian Sea level continued to fall, which was caused by the deterioration of the Caspian Sea water balance. The low-water 2014, when the annual runoff in the delta top amounted to 212.5 m³, was followed by another low-water year 2015 (the annual runoff was estimated at 182.3 m³).

According to the data received by all the hydrometeorological organizations -CASPCOM members, the rate of sea level fall in the second half of 2015 was rather rapid and made 5-10 cm per month. The mean Caspian Sea level estimated by the data received at 4 posts¹ in the second year half was falling at the rate of 8 cm a month.

According to the observations data received at these posts, the average Caspian Sea level in the second half of 2015 made 1 cm (-27.99 m BS), down 23 cm against the same period of the previous year. The average annual level of the Caspian Sea in 2015 made 9 cm (-27.91 m BS), down 20 cm as compared to 2014.

Fig. 1 shows that the rapid fall of the Caspian Sea level resulted in its crossing the zero line in October 2015 (according to the data of coastal observations). In December the mean value of the sea level made 14 cm below this mark (-28.14 m BS).

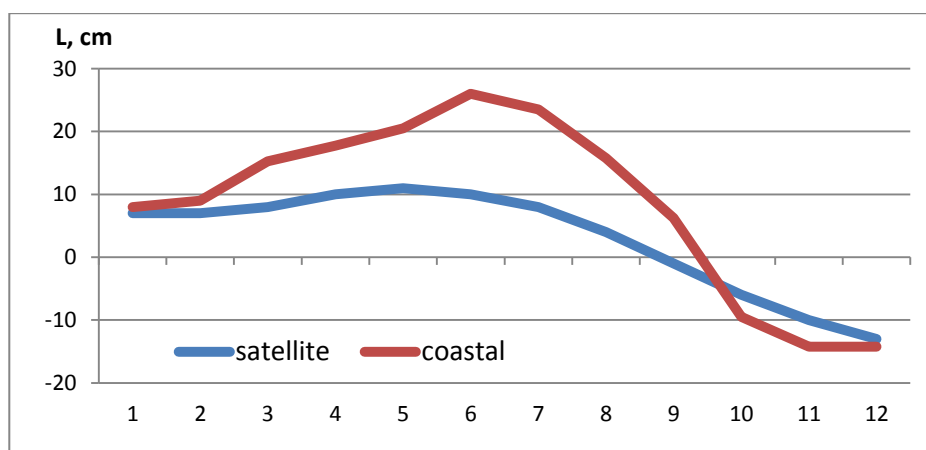


Fig. 1. Seasonal variations of the Caspian Sea level (L, cm) in 2015 according to the data of coastal and satellite observations

Figure 1 shows the graphs of the seasonal changes of the Caspian Sea level according to the data of coastal and satellite observations. It should be noted that satellite data are

¹ To calculate the mean level we have used observations data at 4 "century" posts: Baku, Neft Dashlary (Oil Rocks), Makhachkala, Fort-Shevchenko, Turkmenbashi (Krasnovodsk).

for the first time used in the bulletins². It is clearly seen that the range of seasonal fluctuations according to the data of coastal observations is almost by 2 times higher than that in line with the satellite observations (this fact is to be explained).

Alongside with this, the annual sea level marks estimated by the data of coastal and satellite observations almost coincide (Fig. 2). The difference between them throughout 1993 - 2014 did not exceed 6 cm, and in most cases measured 1 -2 cm. It proves that the data of satellite observations are an important source of information on the long-term sea level fluctuations. It should be noted, that according to the satellite observations data, the average annual sea level in 2015 amounted to 3 cm (-27.97 m BS), and the mean monthly level fell beyond the zero mark in September.

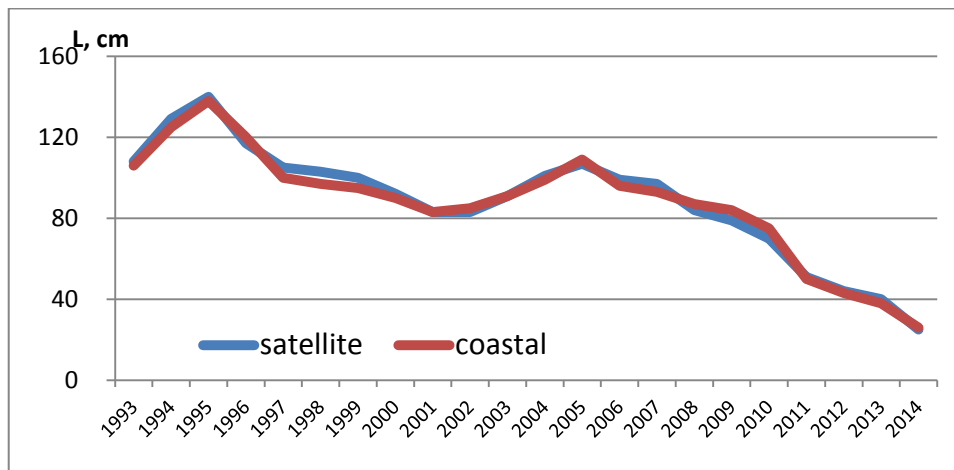


Fig. 2. Annual variations of the Caspian Sea level (L, cm) in 1993 - 2014 according to the data of coastal and satellite observations

The rapid decrease of the Caspian sea level in the second half of 2015 and its fall beyond the -28.00 m BS mark mean that even if the sea water balance is positive or unchanged in 2016, the average annual level will not be higher than this mark and is likely to be by 15-20 cm lower than in 2015. This is an optimistic scenario. In case the sea water balance deteriorates further, the rate of sea level fall will increase.

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

² Satellite data were kindly provided by Dr. S.A. Lebedev, Geophysical Centre, Russian Academy of Science, sergey_a_lebedev@mail.ru