

COORDINATING COMMITTEE ON HYDROMETEOROLOGY OF THE CASPIAN SEA (CASPCOM)

Information bulletin on the state of the Caspian Sea level No.13 25 March 2017

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.

The mean Caspian Sea level at the seasonal peak in July 2016 measured 16 cm (-27.84 mBS), up 5 cm as compared to the previous year. The main reason was the increased water content in the Volga river, which annual discharge at the delta top made 261 cubic km, which is by 40% higher than in 2015 and by 5% higher than the mean value for 1961-2015.

The seasonal fall of the Caspian Sea level starting from July to December occurred at a lower rate than in 2015. As a result the mean Caspian Sea level in December 2016 measured by 14 cm more than in the same period of the previous year (Fig. 1).

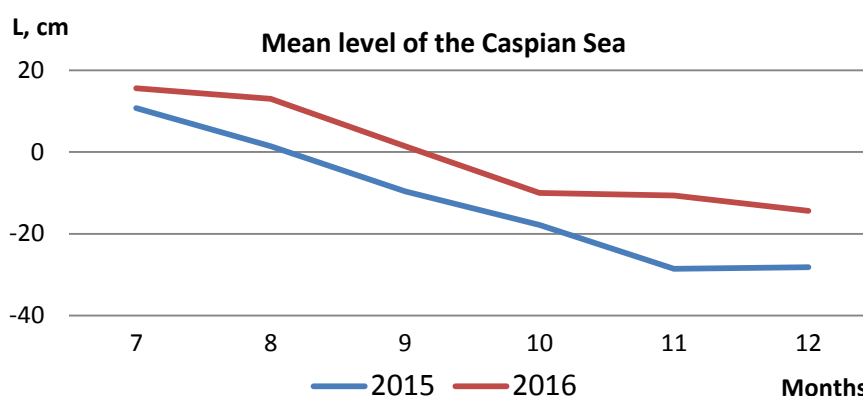


Fig. 1 Seasonal run of the Caspian Sea level in the second half of 2016 as compared to 2015.

If the increment rate of Caspian Sea level in the first half of 2017 is similar to that in 2016 (according to preliminary forecasts of the Volga discharge, which is expected above normal), the sea level in June 2017 will exceed the 2016 values by approximately 5 cm.

Copernicus, which is a satellite component of the global monitoring carried out by the European community (GMES), has recently extended the scope of the Caspian Sea observations. Copernicus is served by a set of dedicated satellites Sentinel, the first of which was launched in 2013. The Copernicus Marine Environment Monitoring Service (CMEMS) provides free and unrestricted access to satellite observations data via its web portal <http://marine.copernicus.eu/>.

In February 2016 Sentinel-3A satellite was launched. Its mission includes the observation of ocean and sea level, including the Caspian Sea. Figure 2 presents the graph of Caspian Sea level changes in the second half of 2016, according to CMEMS data. Hydroweb website (<http://hydroweb.theia-land.fr/collections/hydroweb/4b4104d0-aa8b-5e62-ae1e-a8ef46cc4b69?lang=en&basin=Caspian&lake=caspian>), which is the source of this image, allows tracking sea level online.

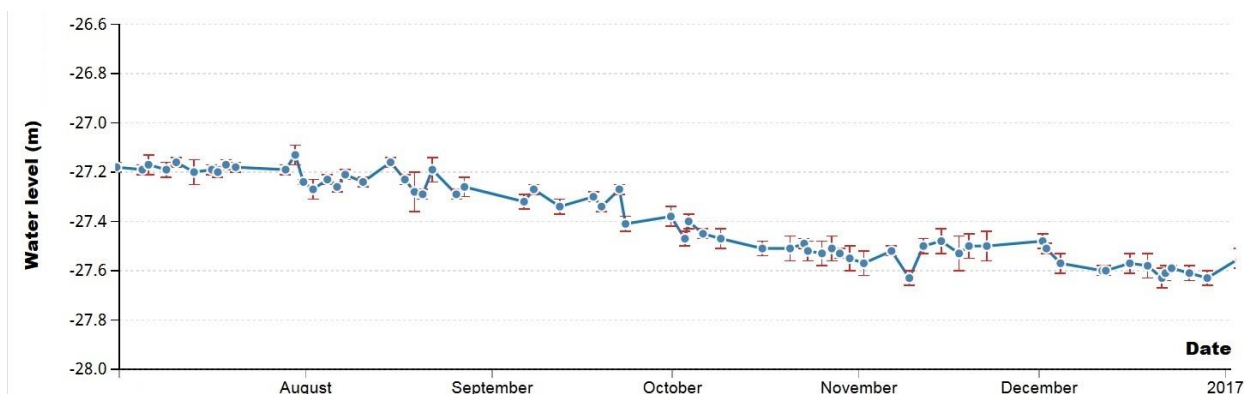


Fig. 2. Changes of the Caspian Sea level in the second half of 2016 according to satellite observations data.

Sentinel-3A makes it possible to trace daily sea level changes not only for certain points of the water area, but for the whole area of the Caspian Sea. Maps of sea level fields based on Sentinel-3A data, which can be seen in Figure 3, are daily displayed and updated at ESIMO website http://hmc.meteorf.ru/sea/casp/ssh/ssh_casp.html

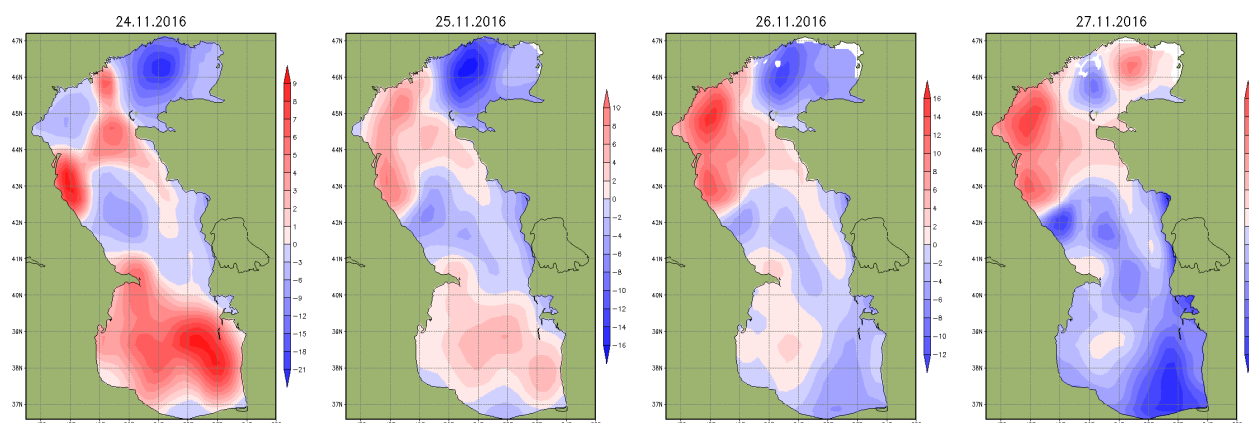


Fig. 2. Changes of the Caspian Sea level on November 24-27 according to satellite observations data. Closed blue lines represent cyclonic eddies, red lines represent anticyclonic eddies in the sea area.

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