

2015 GSA Annual Meeting in Baltimore, Maryland, USA (1-4 November 2015)

Paper No. 219-4

Presentation Time: 9:00 AM-6:30 PM

COASTAL GEOMORPHOLOGY OF CHELEKEN PENINSULA

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Cheleken peninsula is a special geomorphologic region, located in the Turkmenistan sector of the eastern coast of the Caspian Sea. The main part of the peninsula is a Khvalynian age terraced valley with low sandy North and South Cheleken spits.

Studying the impact of the Caspian Sea level fluctuations on the dynamics of coast of the peninsula was performed using analysis of detailed satellite images and large-scale maps and field studies carried out in 2006-2010.

In 1975, the west coast of the peninsula was a dead cliff with a wide beach, where abrasion were active only in severe storms. By 1995, as the Caspian Sea level reached its maximum value (-26.66 abs.), abrasion were distributed throughout the central part of the peninsula. At present (-27.21 abs.), due to sea level drop, the length of dead cliffs increased.

During sea-level rise by the year 2000 abrasion was active at coasts, where it took place before. Coasts with 1929 year terrace, common on the west of the peninsula, due to formation of a series beach ridges and their movement toward land, transformed into a lagoon beaches.

As the sea was rising, the area of the peninsula, which amounted to 686 km² in 1975 declined by 2000 to 588 km², and then, has risen again to 617 km² in 2010. We noted an increase of coastline length, as a result of greater irregularity of the lagoon coasts, which became widespread as a result of the rising sea level.

Session No. 219--Booth# 272

T138. From the Caspian to Mediterranean: Environmental Change and Human Response during the Quaternary (IGCP 610) (Posters)

Tuesday, 3 November 2015: 9:00 AM-6:30 PM

Exhibit Hall (Baltimore Convention Center)

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