

The climate change and its effect on the surface fluctuation of open seas (as Persian Gulf), and pluvial closed sea (as Caspian Sea)

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The sea level is subjected to severe change by different factors :

-Astronomic attraction (Tide)

-Geological activities :faulting ,volcanism,coastal flexure ,subduction,etc...

-Anthropologic effect ,such as dam construction ,agriculture use of running water,etc...

-Climatic change by diurnal ,seasonal,short or periodical change in precipitation(P), temperature ,evapo-transpiration (ET) , specially glaciations interglaciation periods .We had compared the change of sea level in two model seas in quaternary,the Caspian Sea as closed pluvial lake ,and Persian Gulf as open sea,in north and south of Iran. The normal bilan of Caspian Sea is negative (input<output).The catchement area of Caspian sea is about 2000000 km² situated in mid latitude area,in which increasing of 1 degree temperature occure,the evaporation of 45 kg/km² in region,but ,the melting ice in higher aroud mountain occure only 35 kg waterin km² and the deficit to reach in Caspian sea is about 10/35,then Caspian sea level decrease in warm period interglaciation,and increase in normal period with deficit of 45km³.This phenomena does"nt occure in open ocean were the surface in warm period increase normally such as Persian Gulf(interglaciation) ,it decrease in cold period (glaciations).

Key words : Pluvial lake ,Glaciation,Sea level fluctuation,Quaternary