



***Development 3D Model of Adaptation of Coastal Zone of Azerbaijan at the various levels of Caspian Sea
[Ramiz Mahmud. Mammadov]***

Key words: Caspian Sea, level, variability, coastal zone, 3D-model

Abstract

The aim of the research is of 3D GIS model of coastal zone of Caspian Sea in Azerbaijan. The purpose of development of 3D model is assessment of the impact of sea level change to natural, social-economic and ecological condition of coastal zone. The last purpose of the research is preparation the recommendations and proposals in this sphere for relevant ministries, agencies and organizations.

First of all, in order to achieve some results there should be identified prognosis of the most probable ranges of level of Caspian Sea. Then taking into consideration the relief and other natural condition, social-economic condition there should be prepared classification of change of sea level for coastal zone of Azerbaijan.

At the next stage as pilot area, there will be assessed natural-resources potential (climate resources, land and plant cover, hydrology and hydrogeology, ecology) and existing social-economic condition of south part of Azerbaijan coastal zone of Caspian Sea – Samur-Shabran region.

Creation of data base, preparation of digital (electron) landscape, land, plant cover and ecological maps is one of the aims of GIS. There were used highly distinctive digital pictures taken from artificial satellites of Earth taken from for the development of the maps.

The stated problem is topical as the coastal zone of Caspian Sea and its shelf is very important for Azerbaijan and in the light of climate change tendencies anthropogenic pressures are increasing and there is not specific scientific-practical based strategy in this field.

Introduction

Ocean and sea coastal zones are the most favorite places to live for the world population. This is because the coastal zone is rich with natural conditions and resources, an abundance of jobs, ease of communication with other regions and countries, and other factors. The total area of coastal zone all over the world is not so big and that is why it is impossible to provide to all the area in the coastal zone [Dolotov Y., 1996]. One of the tools of management in such condition taking into account existing and changing natural conditions is territorial organization of population and economy i.e. social-economic and physical geography.

It should be especially noted that management of coastal zone in the changing condition is faced with additional and rare difficulties. Density and mixture observed in most ocean coastal zones in the world is also observed in coastal zone of Azerbaijan especially in Samur-Shabran region. Moreover, if the level of world oceans and seas will be raised in future, the level of water in Samur-Shabran region has been already raised. In a short time level of Caspian sea has been raising rapidly, for example during 1978-1995 years the sea level raised for 2,5 m and