

Секция «Структура, функционирование и эволюция природных геосистем»

The Changing of Coastline in Surabaya Indonesia Using The Technology Of Remote Sensing

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Surabaya is a coastal city located in the North-East of the island of Java. Surabaya is one of the largest cities in Indonesia, which is home to more than 3 million people. The coastal zone is interesting because of changes in land use there is a rapid growth of the territory. These changes have a significant impact on the coastline of Surabaya. The aim of the study is to determine the changes in the shoreline of Surabaya over the past 15 years, for the period 2003-2018. The technology was used to monitor changes in the shoreline in practice - the method of remote sensing. This study uses satellite imagery from Landsat 7 for 2003 and Landsat OLI 8 for 2018. In 2003, the shoreline had a length of 58,60513 km and in 2018 increased to 65,539713 km i.e. 6 934583 km from the Coast of Surabaya, Surabaya shores are characterized by the development of abrasion processes that recorded 85 areas of erosion of the shore. The total area of erosion from 2003 to 2018 is about 155,8325813 hectares, while the accumulation of about 165,3892721 hectares. One of the reasons for the increase in the area of the coast in Surabaya are changes in the nature of land use. Based on the interpretation of the image by remote sensing, in East Surabaya area has expanded due to the development of mangroves. In North Surabaya (bordered by the city of Gresik) the increase in coastal areas is associated with the creation of a new port complex.

Key Words: coastline, remote sensing, Surabaya Indonesia, abrasion, accumulation.

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