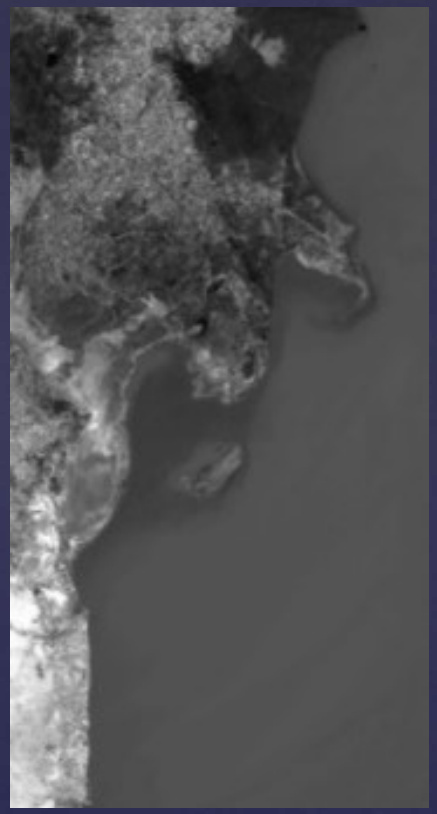
ASSESSMENT OF THE IMPACT OF THE CASPIAN SEA LEVEL FALLING TO THE COASTAL ZONE GEOMORPHOLOGY CHARACTERISTICS OF THE CASPIAN SEA FROM THE CAPE BANDOVAN TO ASTARACHAY RIVER OF THE AZERBAIJAN WATER BASIN BASED ON SATELLITE IMAGE PROCESSING

Turkan Mamishova[1], Amir Aliev[2], Rauf Gardashov[3]

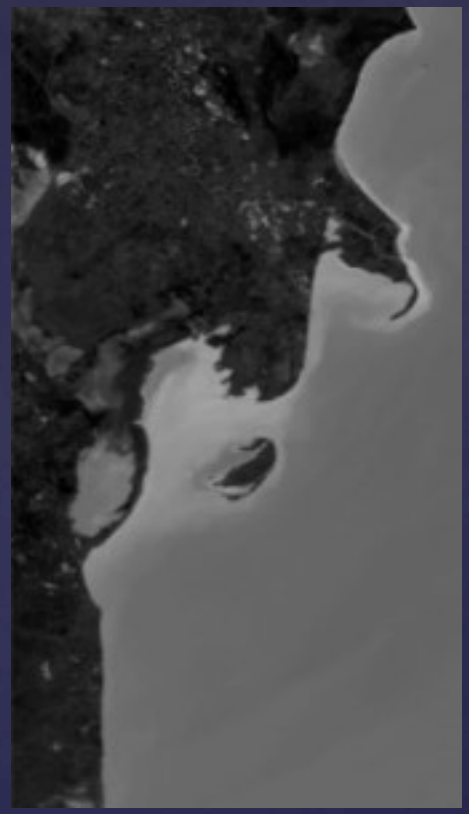
[1]*National Aerospace Agency (NASA) Baku, Azerbaijan, turkan.memishova@gmail.com*
[2,3]*Institute of Geography ANAS, Baku, Azerbaijan, rauf_gardashov@yahoo.co.uk*

Shoreline extraction steps

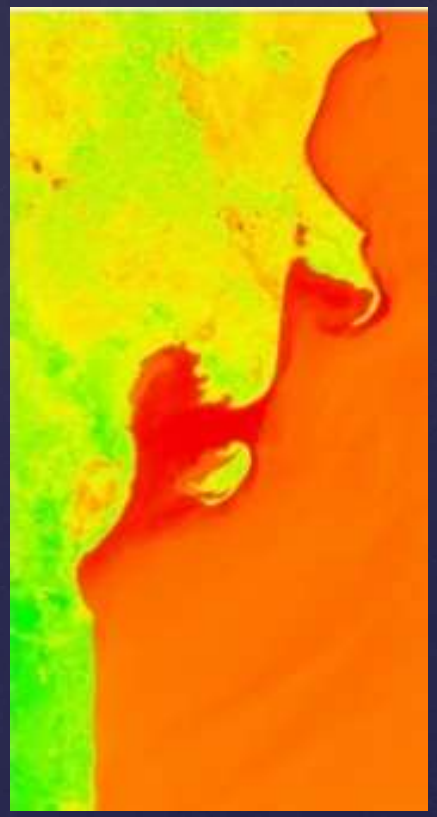
Brightness



Greeness

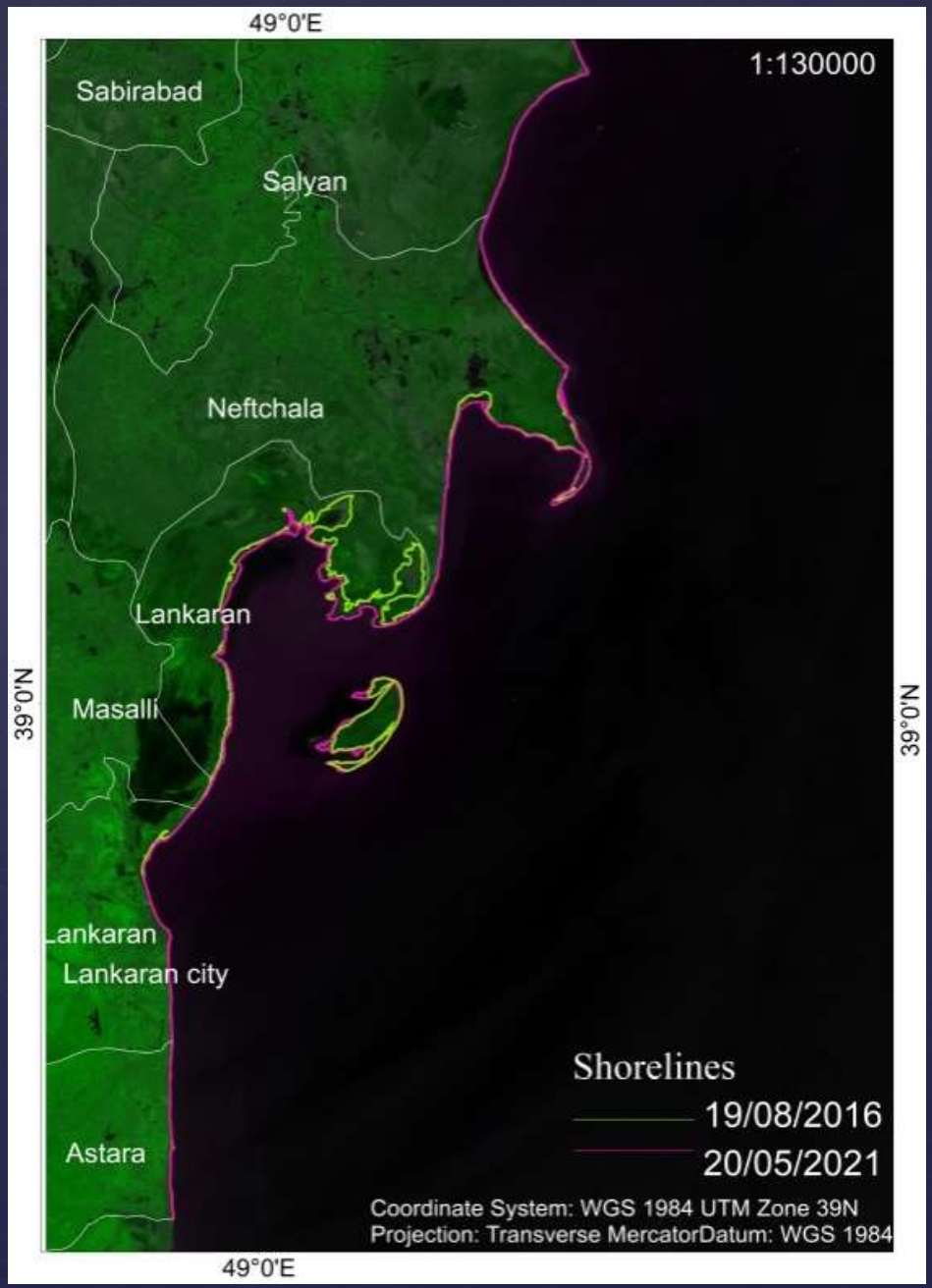


Wetness

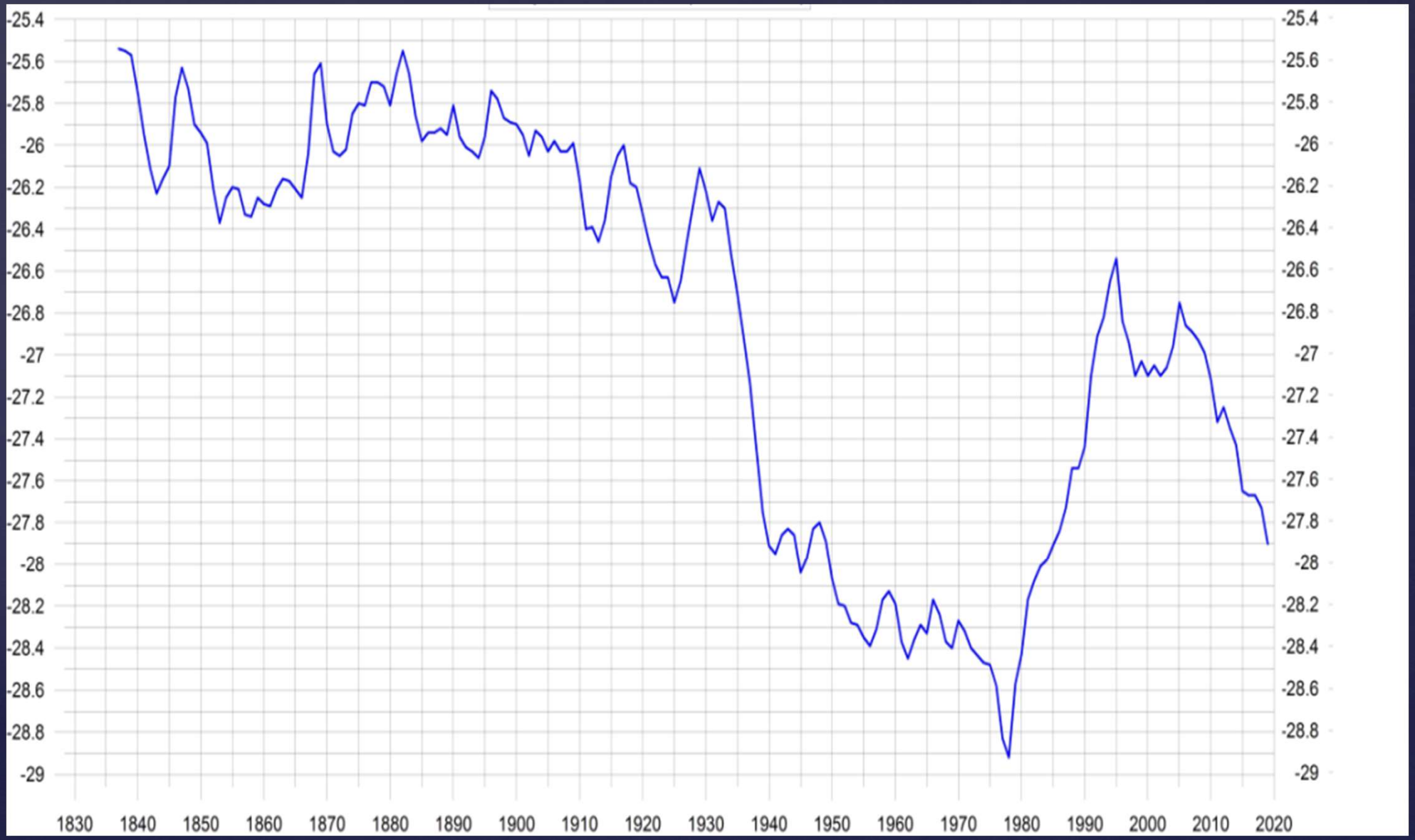


NDVI

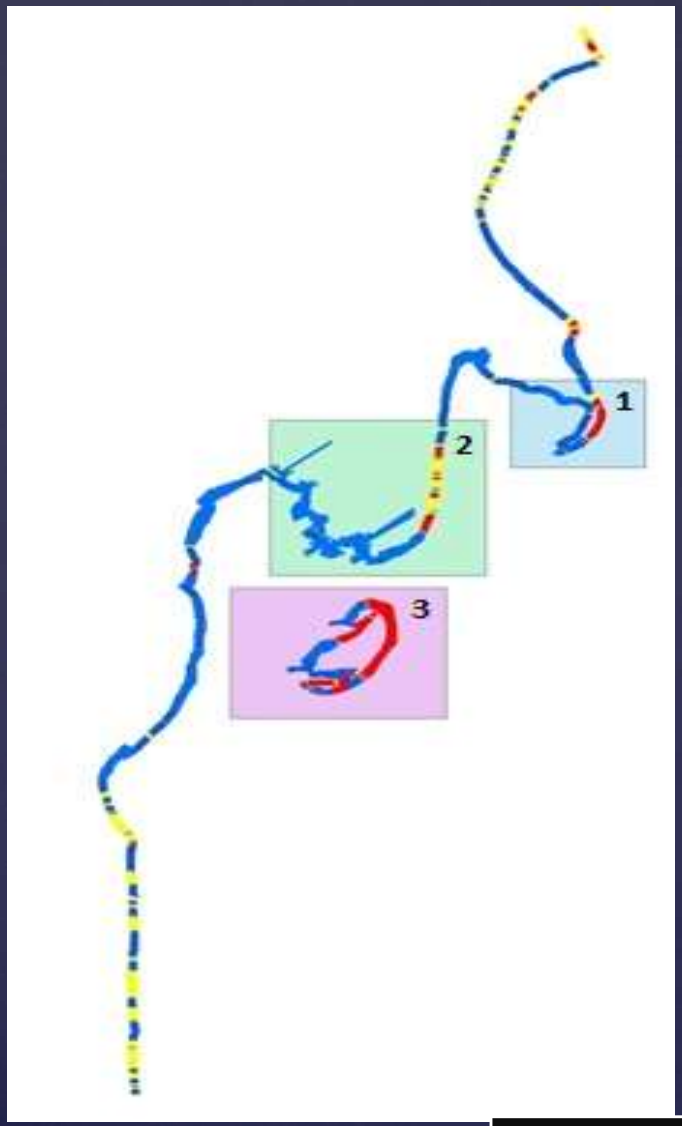
Shoreline extraction results for 2016 to 2021

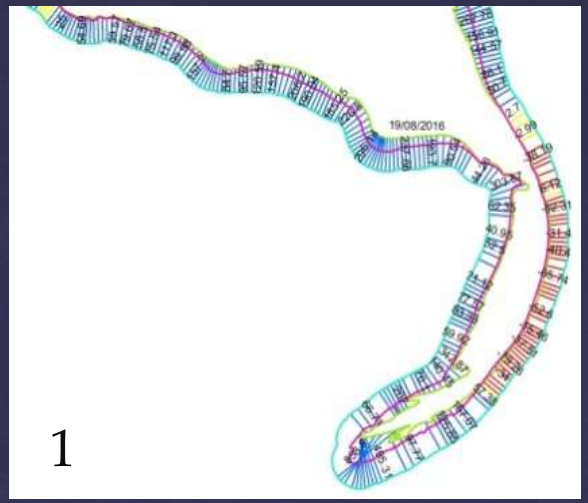


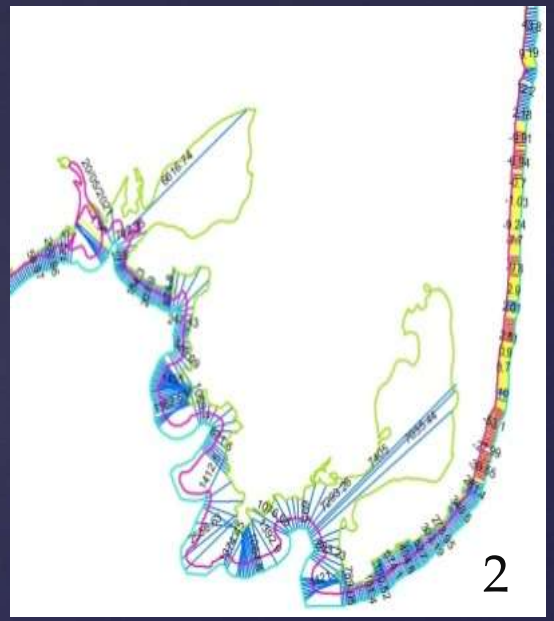
Sea level changes in the Caspian Sea (1837-2019)

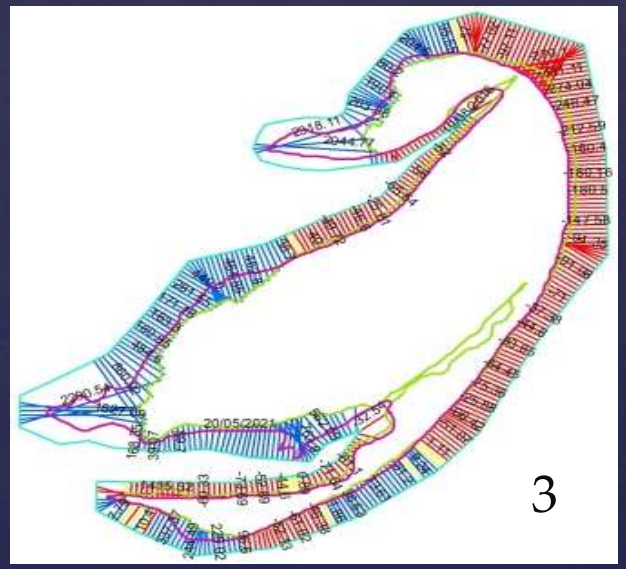


Areas where the coastline is subject to maximum erosion (1) and accretion (2) and result of Kuradili Island (3)



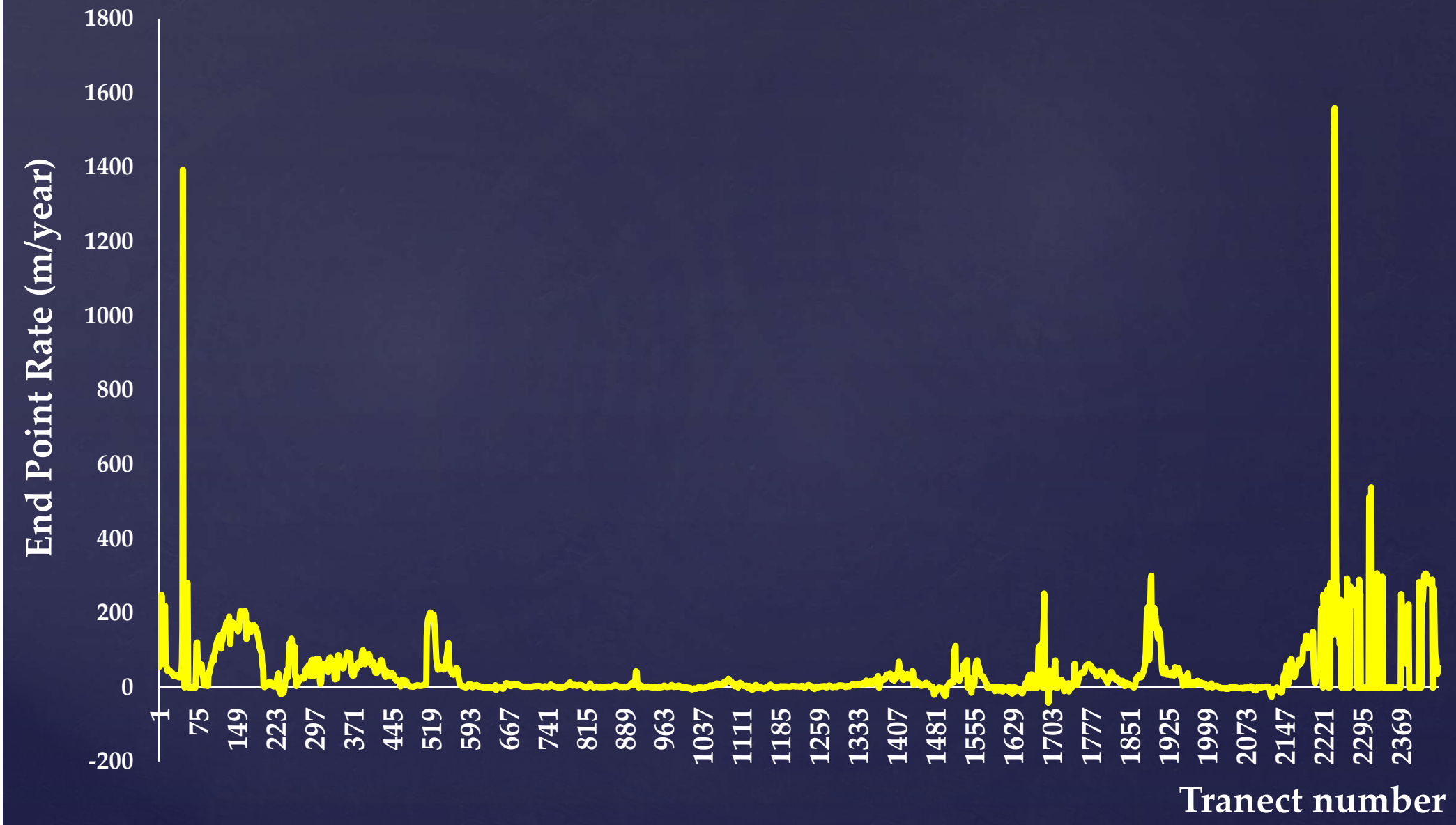




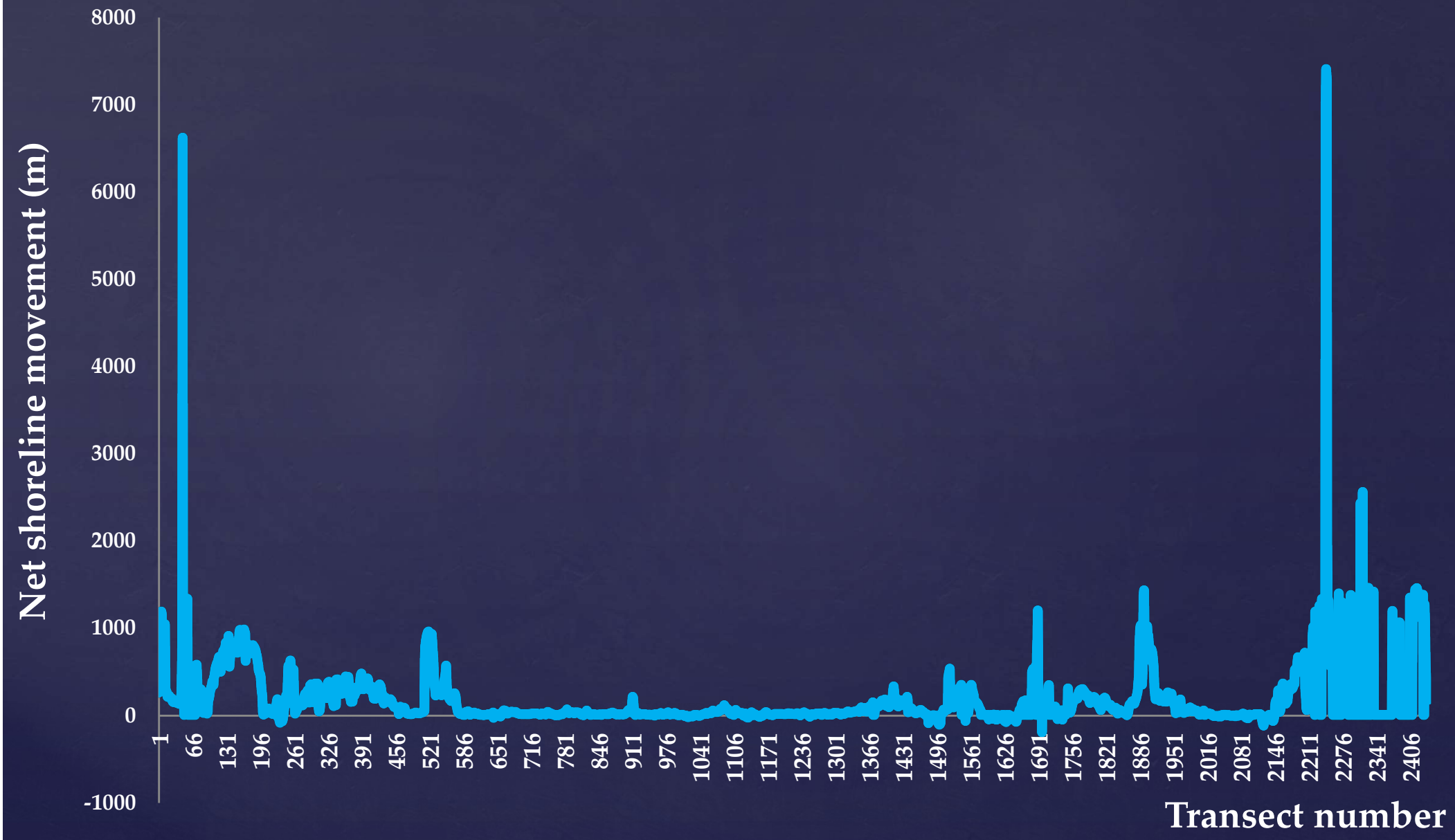


Accretion	Baseline
Erosion	19.08.2016 shoreline
Stable	20.05.2021 shoreline

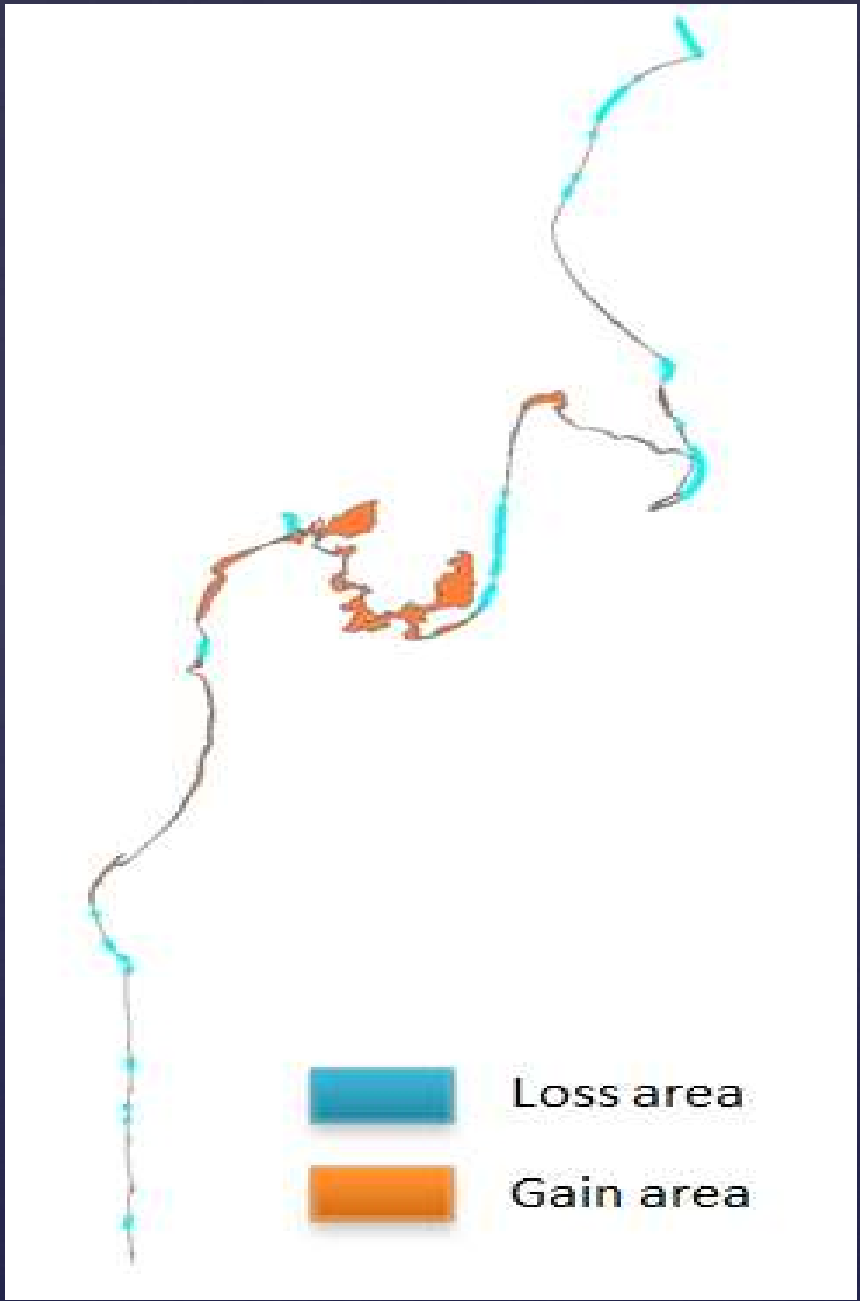
Results of End Point Rate statistics (m / year)



Results of Net Shoreline Movement statistics (m)



Fragments showing land gain and loss area



Results

In the period of 2016-2021, coastal changes are mainly accumulation, and to a lesser extent abrasion.

In 2016-2021, 8052 ha of land was gained as a result of accumulation processes, 71.47 ha of land was lost as a result of erosion.

On Kurdili Island, 623.66 ha of land area increased and 220 ha decrease.

The results show that there is a change in the coastline in 2016-2021, and an average of 230 m of coastal movement to the sea and 23.14 m to land.

Thank you for the attention!