

The current state and strategic importance of the eastern coast of the Black Sea

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The Black Sea is an important socio-economic resource for Georgia, connecting Europe and Asia through land and sea transport, by the so-called "Middle Corridor". Against the backdrop of increasing cargo turnover, it has become necessary to build a new "Anaklia Deep-Sea, 100 Million Cargo Turnover, Port", which will serve the processing and transportation of cargo to consumers on a one-window basis. At the same time, the construction of multifunctional high-rise buildings as commercial and recreational spaces has increased on its coast. The paper discusses the positive and negative consequences of creating two peninsulas and an artificial island of "Ambassadori Batumi Island" [84 ha] without arranging an independent sewage system. The feasibility of a construction project announced by the Arab company "Eagle Hills" in the Gonio settlement area, which spans 260 hectares, is under consideration. This project is planned to be situated between a former Russian military training ground and the protected area of the "Emerald Network" of the Chorokhi Delta (CHOROKHI DELTA GE0000054). It is important to note that the Chorokhi Delta ranks third in the world, following Mexico and Israel, for the number of rare species of migratory birds. If this project proceeds, it could pose a significant threat to this valuable ecosystem.

The study presents the intensification of waves on the eastern coast of the Black Sea, especially over the last 4 years, and the expected external threats due to the ongoing construction of five artificial islands at a depth of 1100 meters in the sea (Republic of Turkey) [<https://bit.ly/3LOUMs2>], one of which is located approximately 70 km from the border, which will inevitably lead to short-term sea level rise and additional erosion of our coastline.

The most pressing issue we face today is global climate change, which is causing a continuous rise in sea levels, the shifting of wave breaking depth, its movement toward the land, and the narrowing of beaches. To mitigate these negative effects, it is essential to reduce the angle of the underwater slope, which can be accomplished by artificially increasing the wave transformation zone. The "Saknapirdacva" organization has been addressing this challenge for years by reinforcing coastlines with solid materials. As a result, they successfully tackled erosion along the Black Sea coast and expanded the eastern shore by 120 hectares, a first in the world. Unfortunately, after the "Saknapirdacva" program was discontinued in 1998, these issues resurfaced. However, with modern innovative coastal protection methods, it is now possible to nourish vulnerable coastal areas artificially and restore them by introducing beach materials along beaches fortified with geo-tubes.