

Smart technologies for the formation of landslide slopes, Odessa



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ABSTRACT

The conscious formation of the anthropogenic landscape of Odessa contributed to the creation of a unique model of sustainable socio-natural development in the first half of the 19th century, oriented towards the future. The problem of slopes is the same age as the city. The territory of the future Odessa had been once steep rocky terrain, dissected by ravines and natural drains. According to geological data, the classic front landslides don't allow the land to come to rest and the process of abrasion will never disappear. Sea transgression causes increased coastal erosion.

The fight against landslides for many years has been carried out in three main areas: 1) protection of slopes from landslides (removal of groundwater using drainage tunnels and drainage galleries), 2) stopping landslides of soil masses (removal of standing rain and underground channels), 3) protection coasts from erosion (building dams). Coastal protection by a breakwater structure was first introduced in Odessa.

The landscaped boulevard slopes with terraces and retaining walls, drainage system of groundwater, based on alluvial port area - this was the first complex of measures on such a grand scale aimed to strengthen the terrain.

Thanks to the competent solution of challenging utility problems - strengthening the lifeless clay cliffs, their improvement, construction of engineering structures - Odessa received its unique "sea" facade and landscaped park already in the first half of the XIX century. Taking into account adverse environmental factors, a model of sustainable development of the relationship between man and the natural environment was solved, future-oriented

KEY WORDS :

Smart technologies, Landslide slopes, Odessa