

TRANSITIONAL BASINS AS BASIC UNITS OF NON-ZONAL DIFFERENTIATION OF CONTINENTAL SLOPE TOPOGRAPHY

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The criteria which are used for the zonal differentiation of the seabed are extremely diverse: structural-tectonic, geological, lithologic and geomorphologic and they are usually relate to the final objectives of studies which can include topographic mapping. The purpose of geo-ecological studies of the Black Sea Russian sector was to describe the system of pollutant transportation from the coastal slope areas to the deep basin. The multi-beam echo sounding of the Russian Black Sea EEZ, provided a complete picture of the morphology of the continental slope. The analysis of the system of canyons on the continental slope, the pathways of sediment transportation from the shelf to the deep basin, helped to single out at the base of the slope transitional basins. These are the areas on the slope with a system of canyons having a common zone of sediment discharge (analogues of freshwater basins onshore) and they can be taken as the basic unit for non-zonal differentiation of the continental slope topography. The area of such basins is about 1476 km². The width of discharge zones of transitional basins at the base of the slope varies from 2 to 7.8 km; the extent of their boundaries varies from 2.5 to 68.5 km and the ratio between these values is 1:20. Transitional basins accumulate all the sediments coming to the slope from the shelf and from the water column in 11 points, thus forming at the base of the slope narrow zones of sediment accumulation with anomalously high concentrations of pollutants.