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Hydrological and morphological approach to establishing the upper (river) boundary of the river mouth area

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Abstract. The article presents the results of studies on establishing the location of the upper (river) boundary of the river mouth areas using the hydrological and morphological approach. Its location for two dozen rivers was determined based on the results of satellite imagery interpretation. Free-access satellite materials (Yandex-maps, GoogleMaps) were used. The selection of rivers for the study was the presence of direct and indirect signs of the spread of marine processes (tides and wind surges) in river channels and floodplain geosystems. River sections differing in the morphodynamic type of the channel and the morphometry of its elements were identified. The location of the river boundary of the river mouth area and the distance to it from the river mouth section were determined by the change (decrease) in the gradient of the frequency of change of these sections. For small rivers, the medium length of the mouth area was 22.6 km; for “small-medium” rivers, 54.4 km; for medium rivers, 42.3 km. The share of the length of the river mouth area in the length of small rivers is about 30 % on average; “small-medium” rivers, 21 %; medium rivers, 9 %.

Keywords:
river mouth area, marine processes, tide, morphodynamic channel type, remote sensing of the Earth

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