

INSTRUMENTAL RESEARCH of the LITHO DYNAMIC PROCESSES

at WHITE SEA ESTUARIES (EGU-2017)

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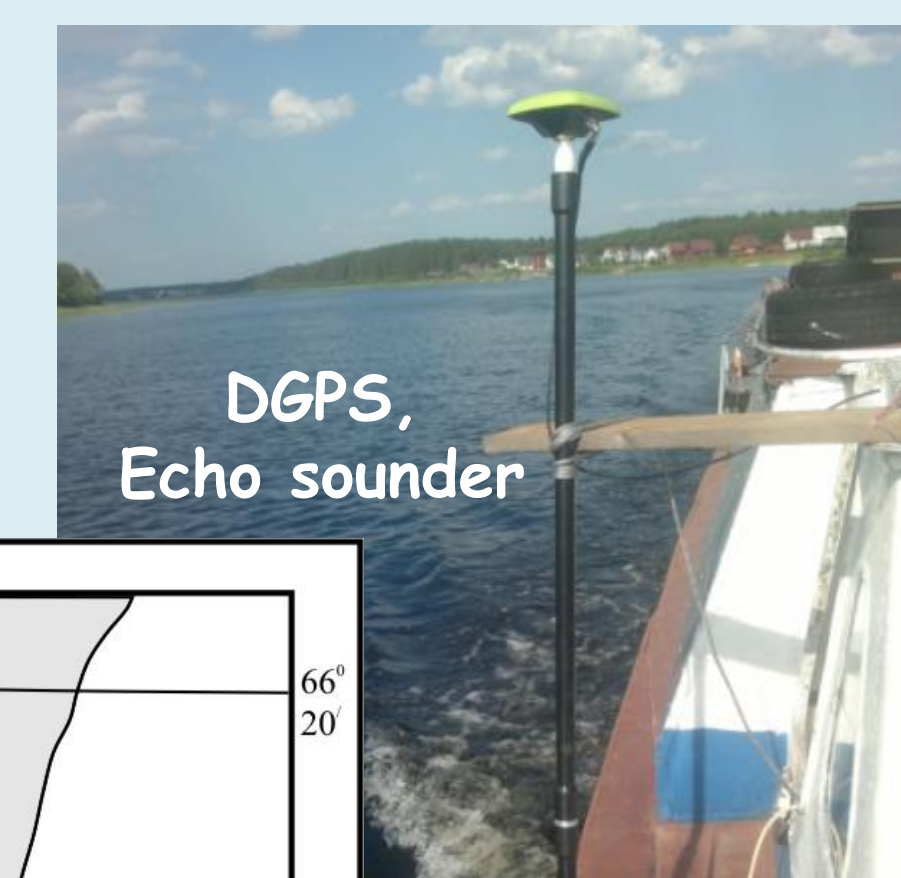
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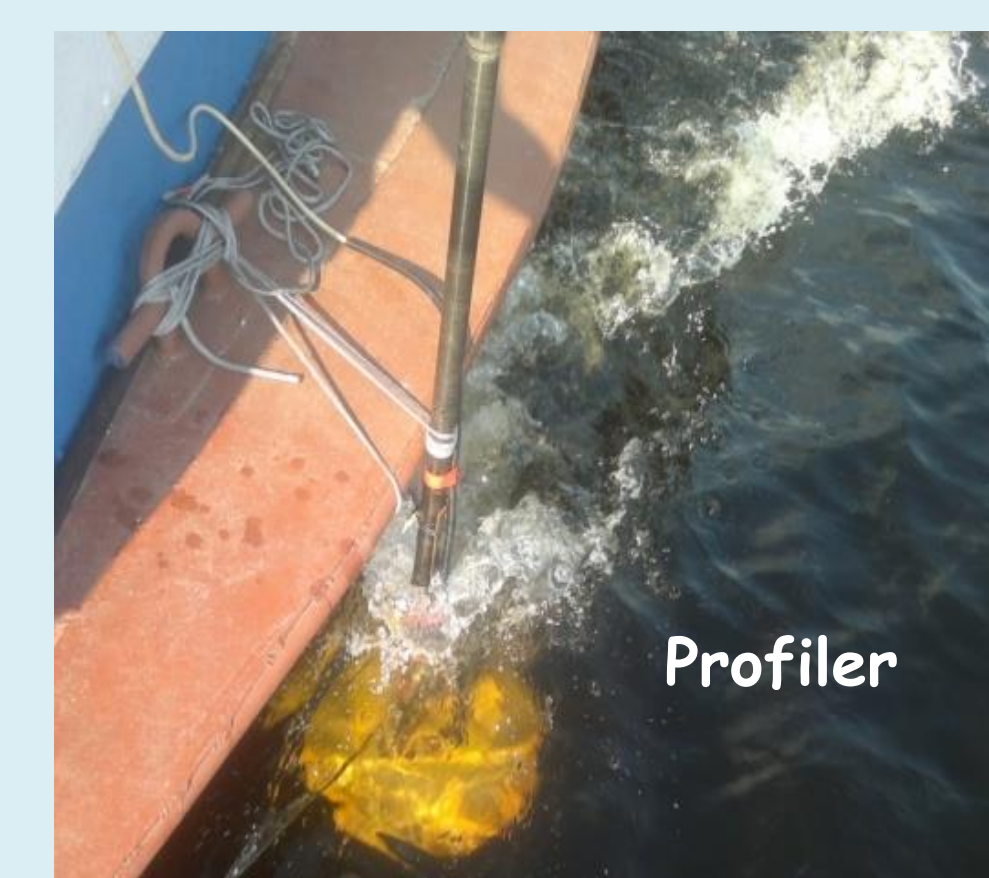
Imagenex SSS «YellowFin» - 330 kHz;
 IORAS sub bottom profiler «AP-5» - 4.5 kHz;
 FortXXI Hydrographic echo-sounder «Scat-50M»;
 Javad GPS-GLONASS receiver Sigma-G3T



Sonar



DGPS,
Echo sounder

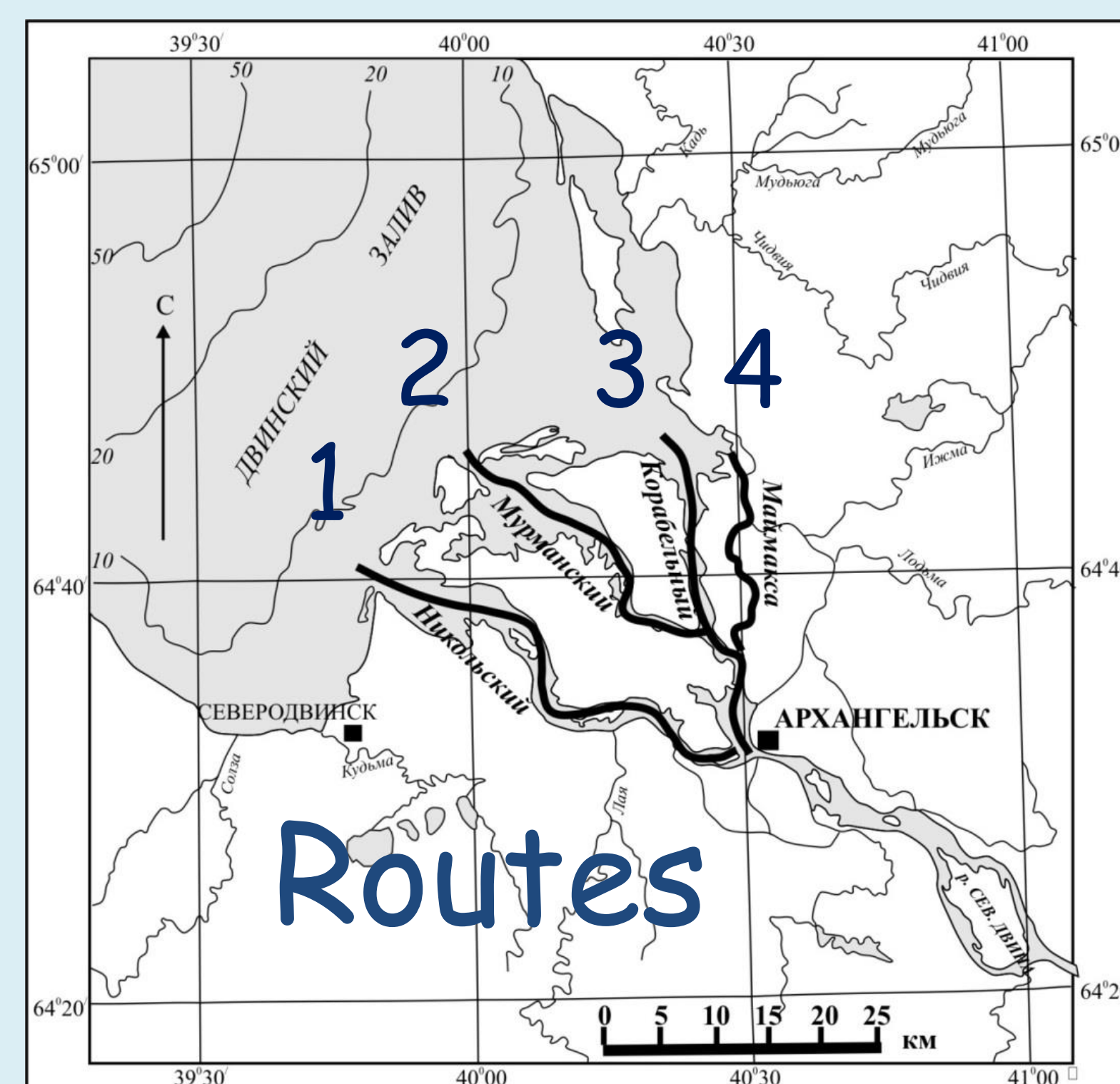


Profiler

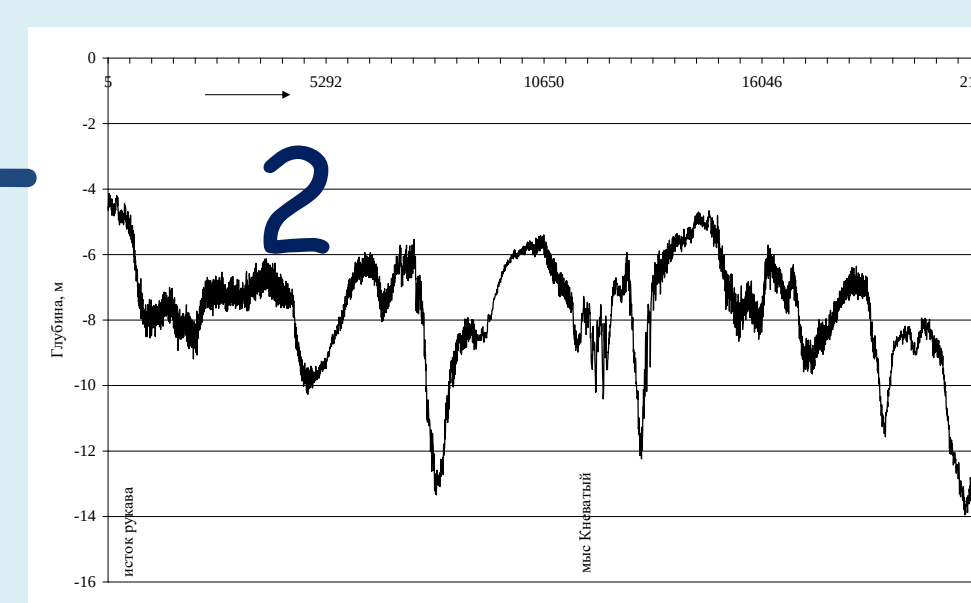
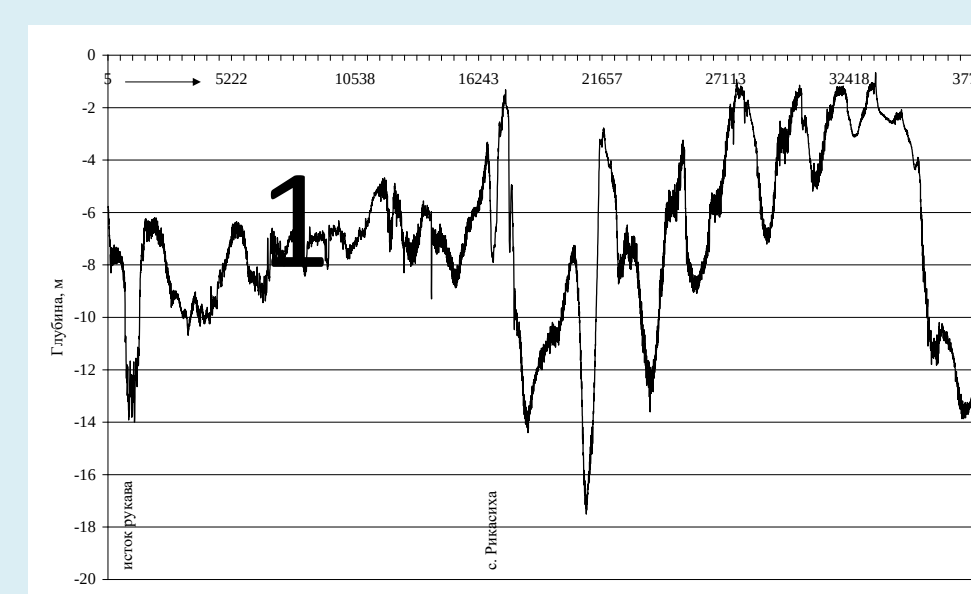
North Dvina

Onega

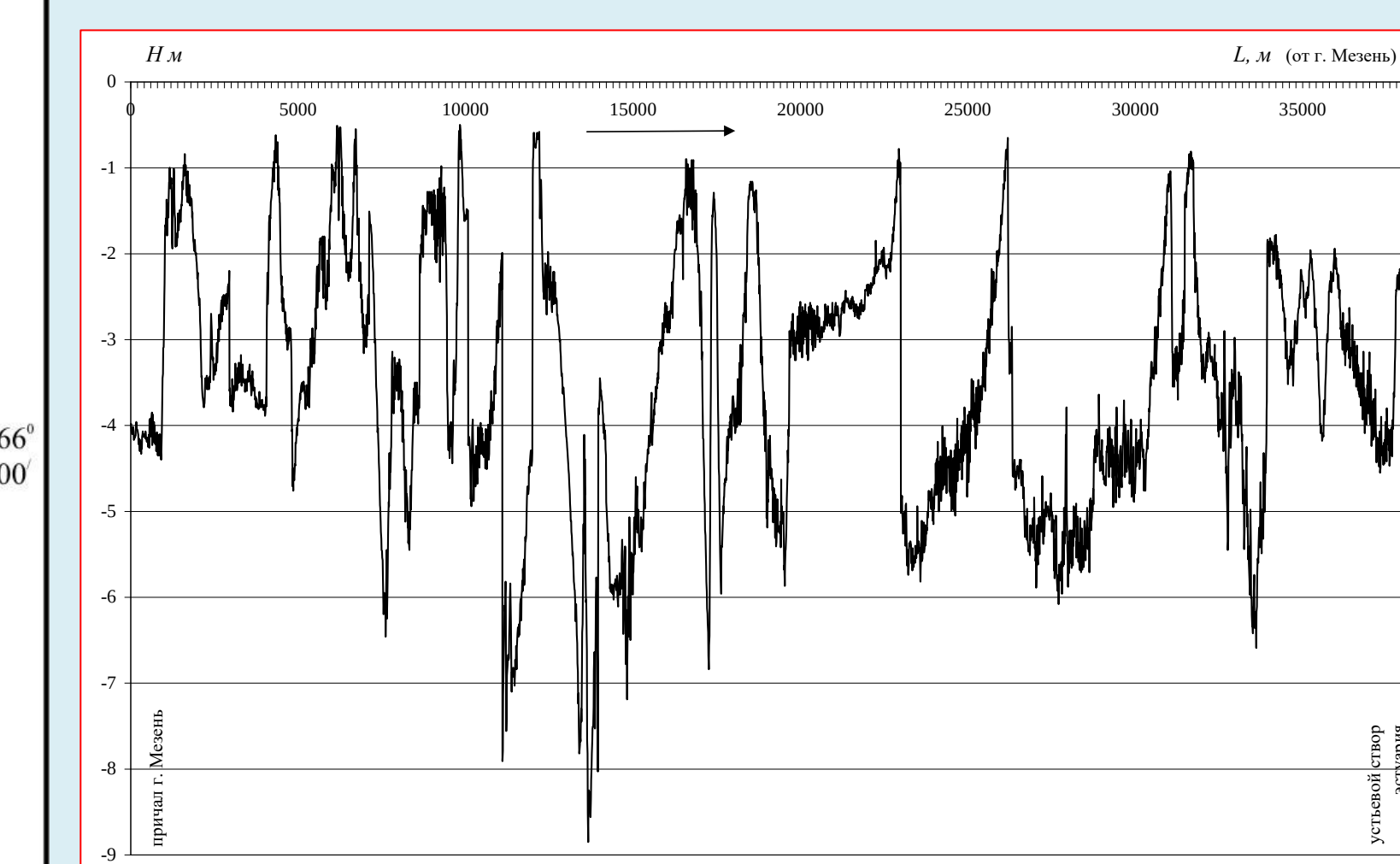
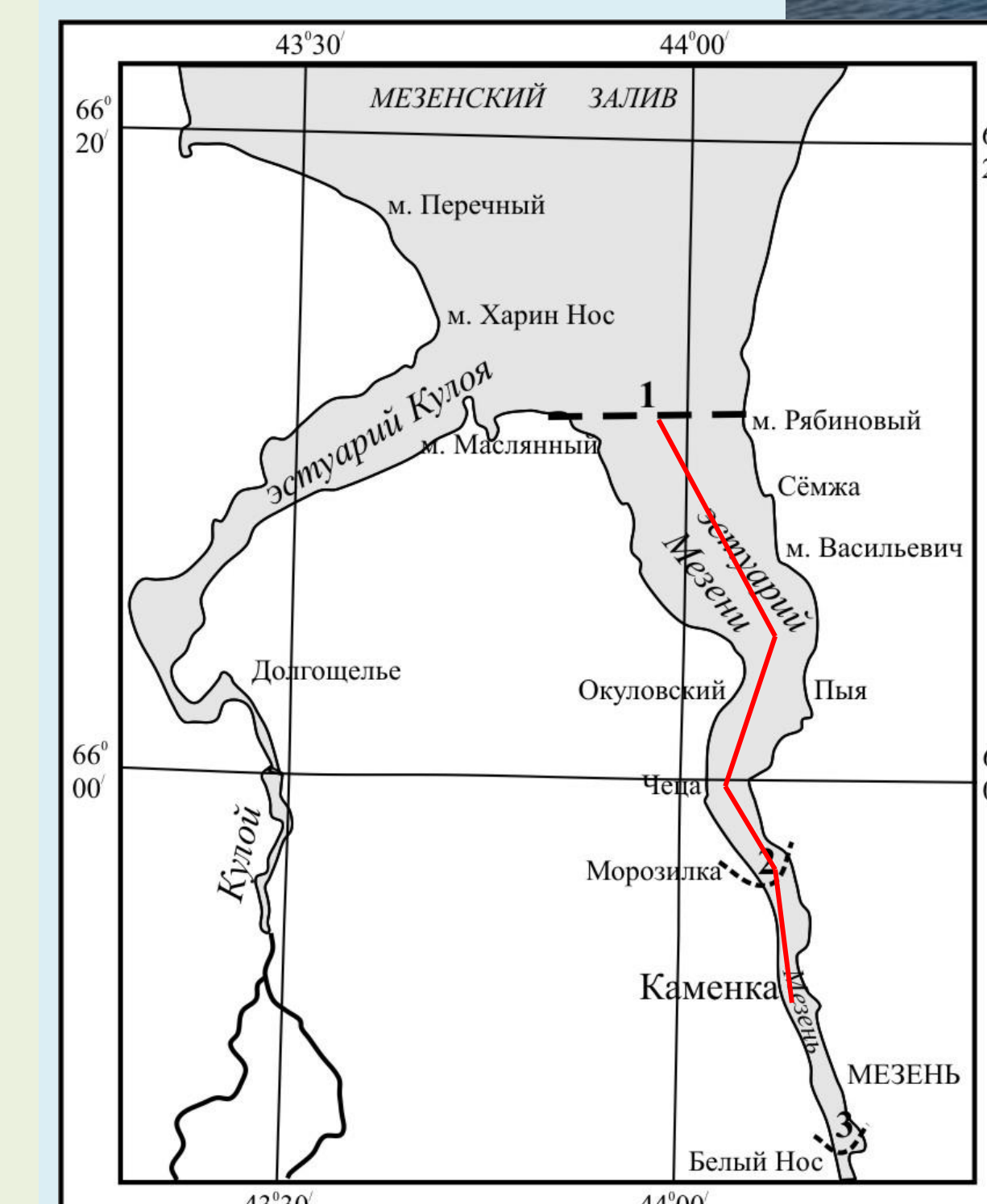
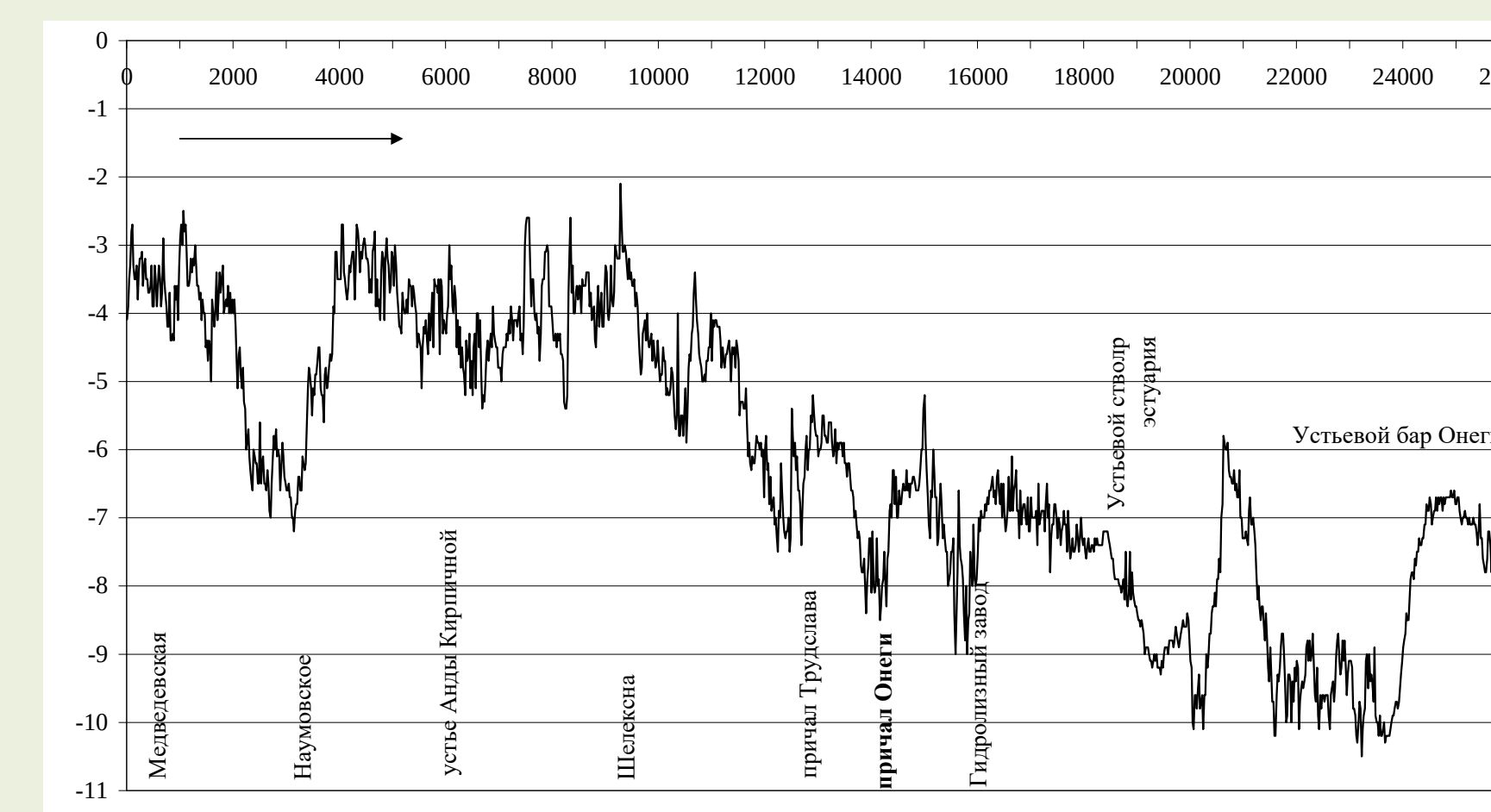
Mezen



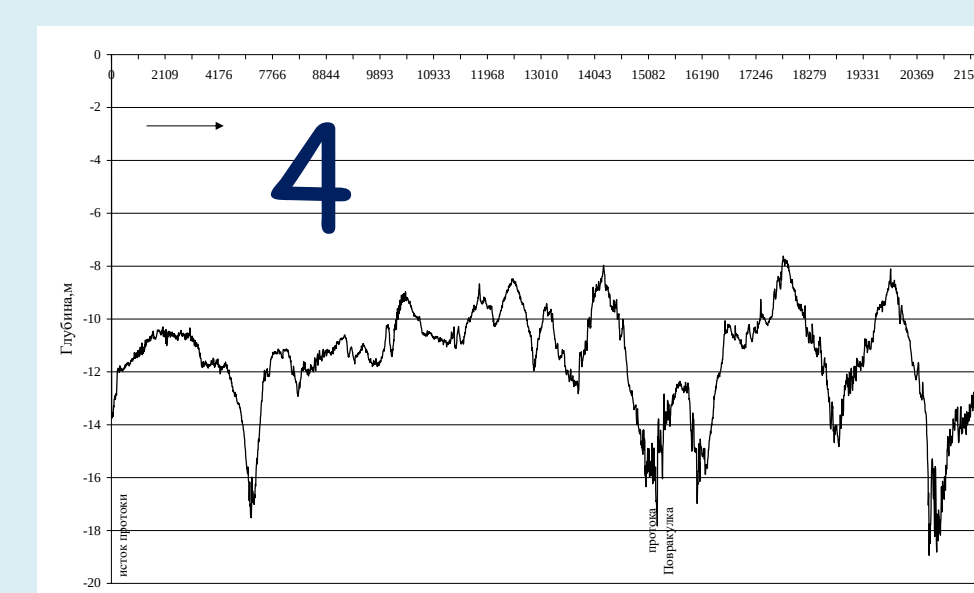
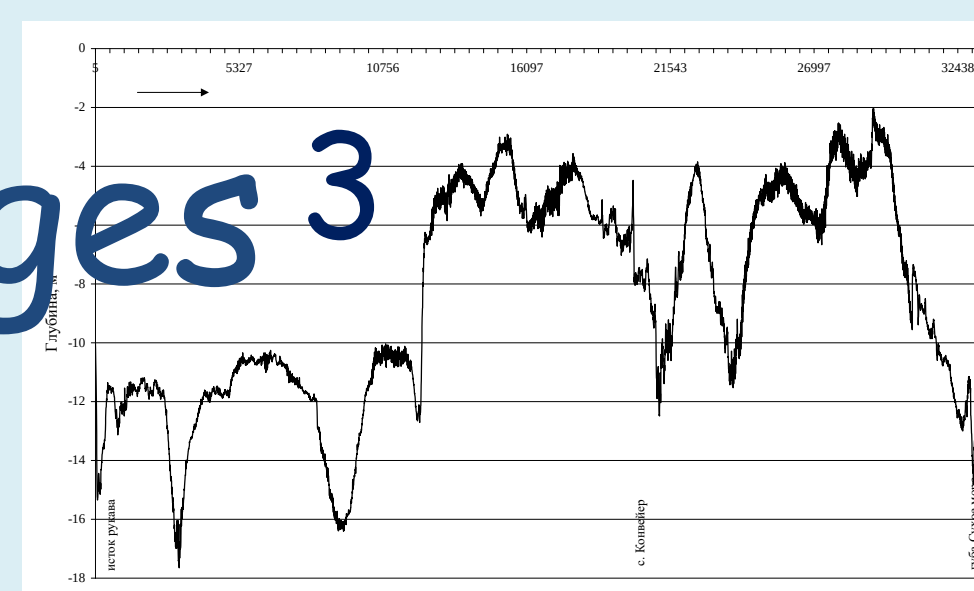
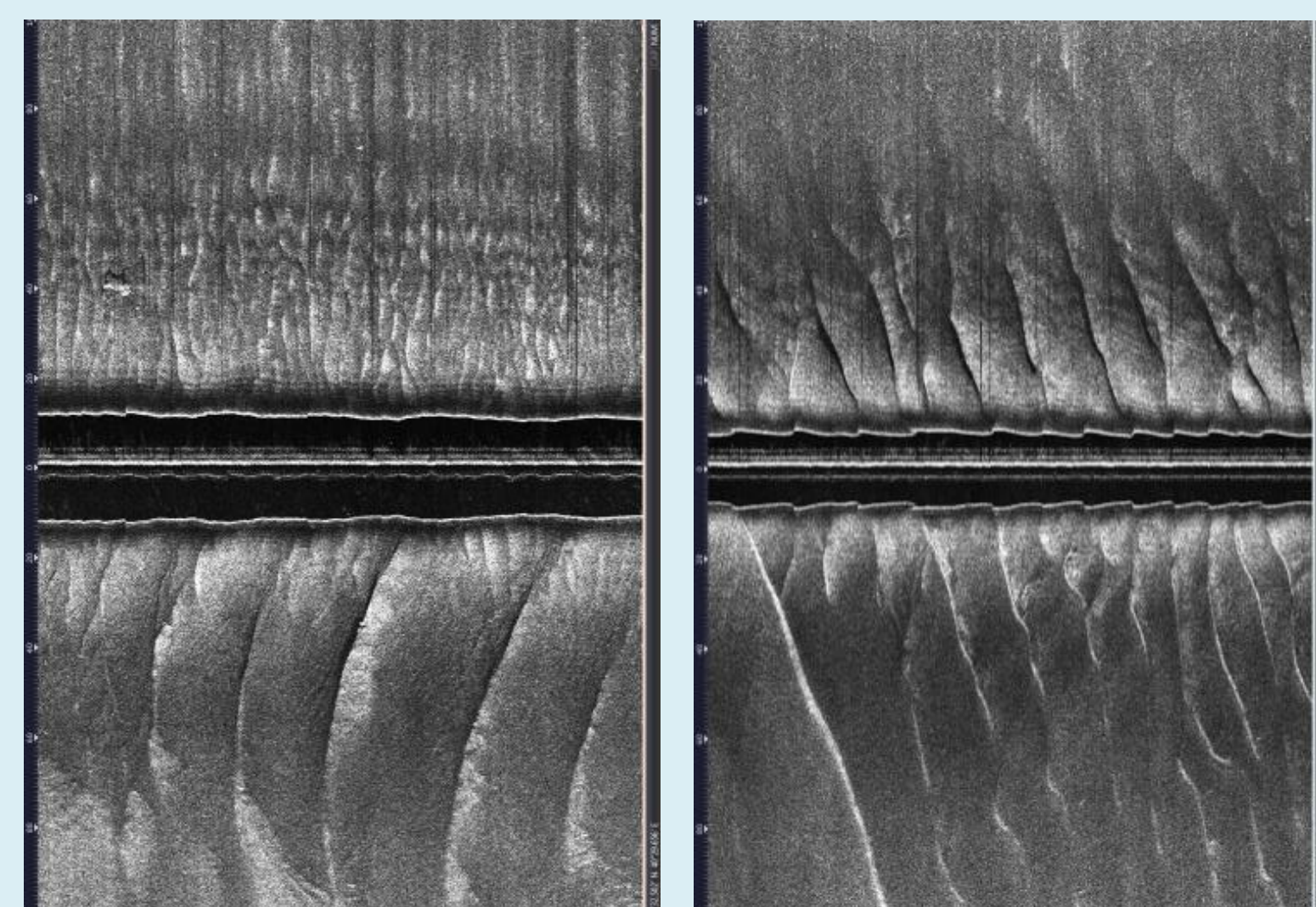
Echo profiles



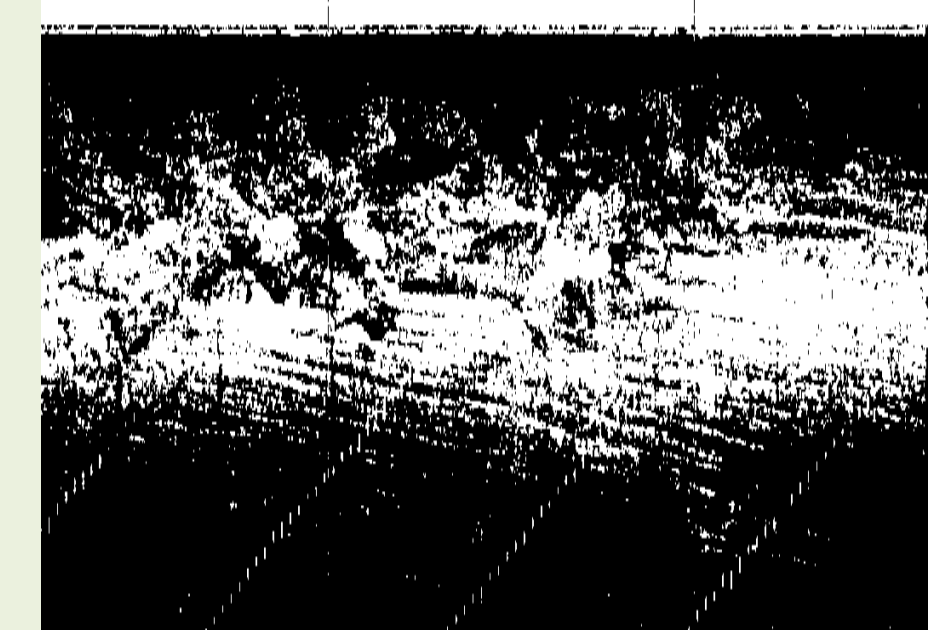
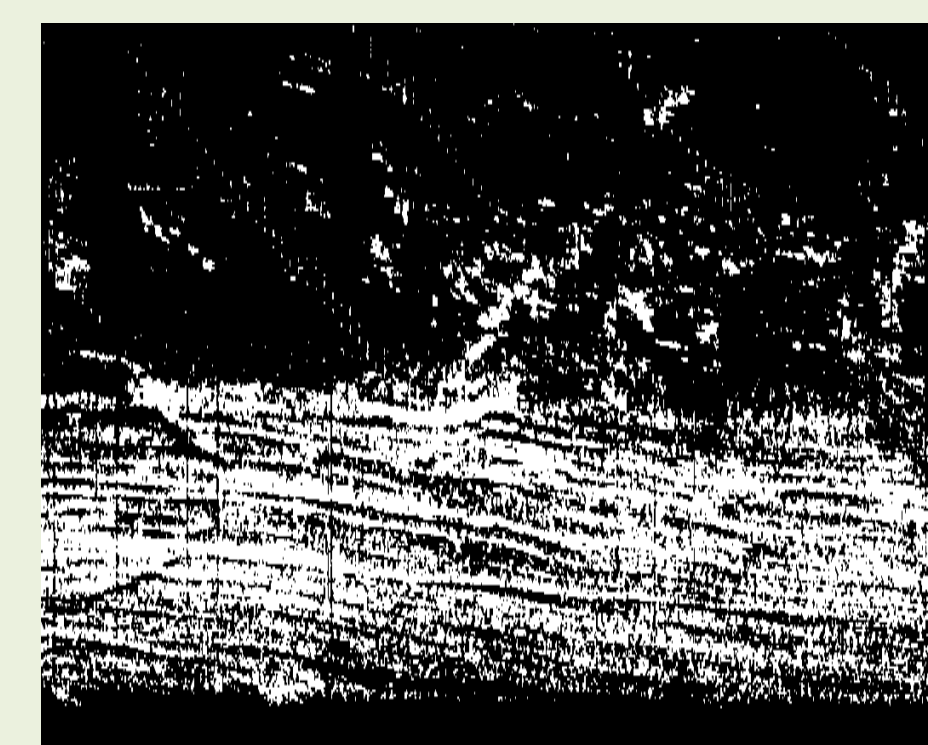
Longitudinal profile



Sand waves and ridges³



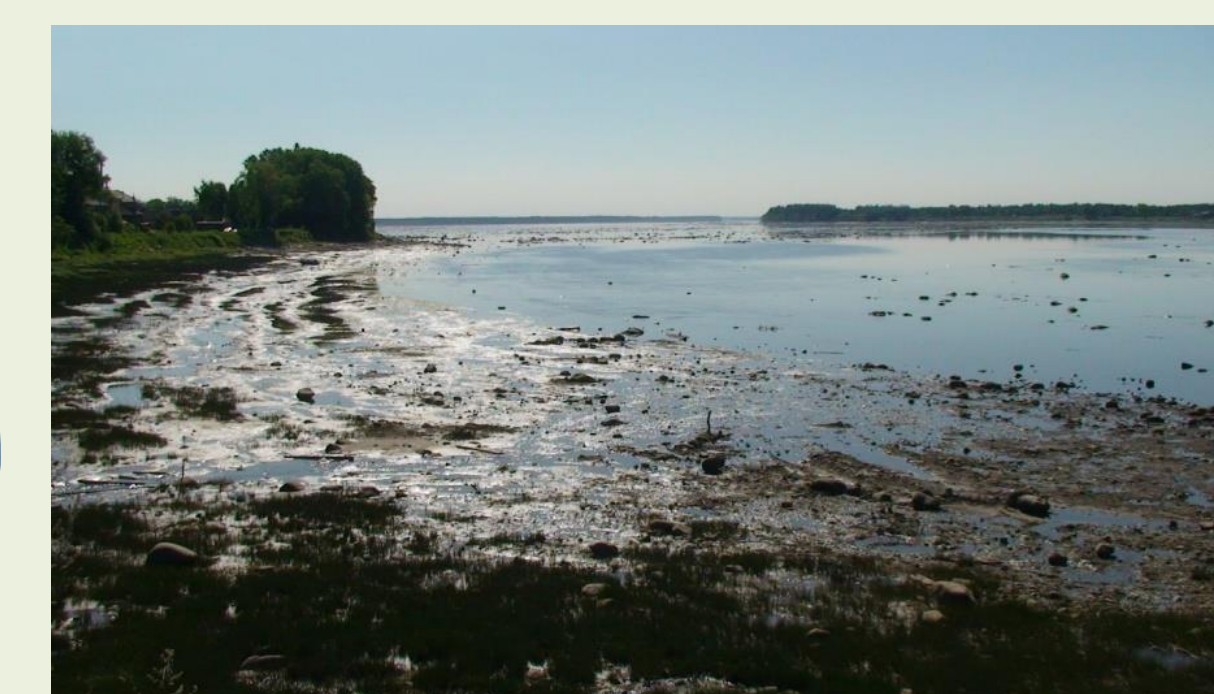
Estuary pebble
and boulder



Tide



Ebb



Tide



Ebb



Young
deltaic
floodplain



Morphological and lithodynamical processes in high tide estuaries (syzygy - 8.5 m) are caused by tidal currents, river runoff, wind waves and sediment longshore drift. Due the movement of huge masses of sediment in estuary occurs the intensive deformation of silt-sand banks, bottom channel trenches reshaping and navigable waterways displacement. In multi-arm deltas an intense processes of increasing of marine edge of delta is observed due to wellhead delta arms elongation and the formation of the small underwater estuarine bars at the mouths.