**Supplement:**

We present the longitudinal profiles of subtidal current and salinity along the channels in the main estuary and the sub-estuary during typical spring and neap tides. Fig. S1 is for the dry condition with 1500 m³/s at the head of the main estuary, and Fig. S2 for the extremely dry condition with 500 m³/s released at the head of the main estuary.
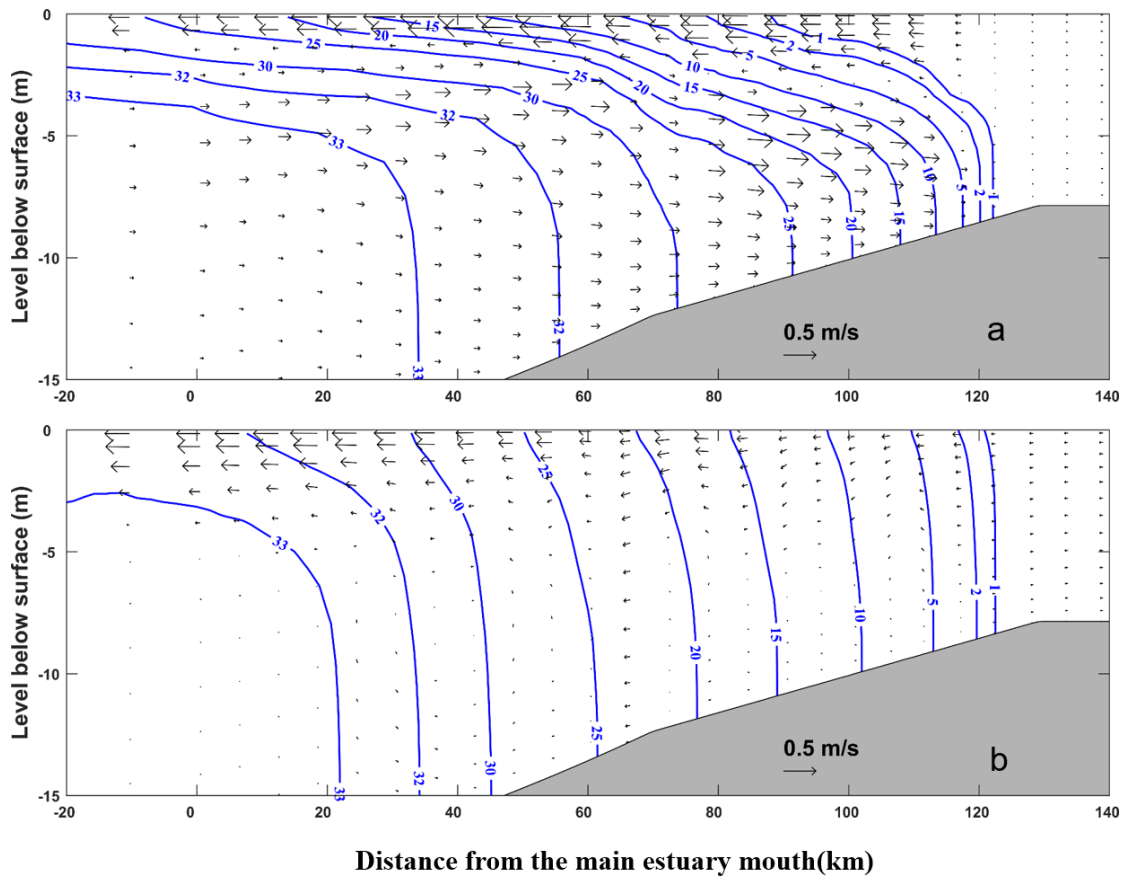
Fig. S1. The longitudinal profile of salinity and mean current in the main estuary under the

river discharge of 1500 m³/s: a) during a neap tide; b) during a spring tide.
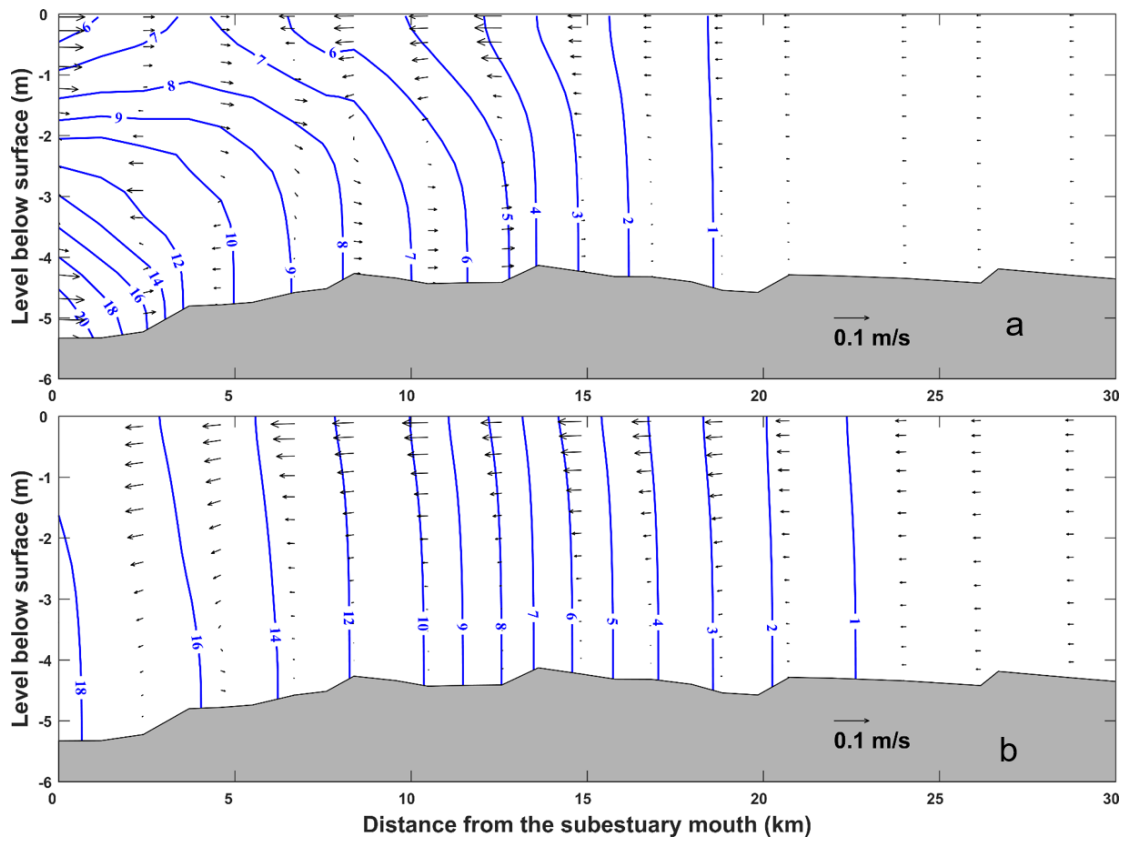
Fig. S2. The longitudinal profile of salinity and mean current in the main estuary under the

river discharge of 500 m$^3$/s: a) during a neap tide; b) during a spring tide.