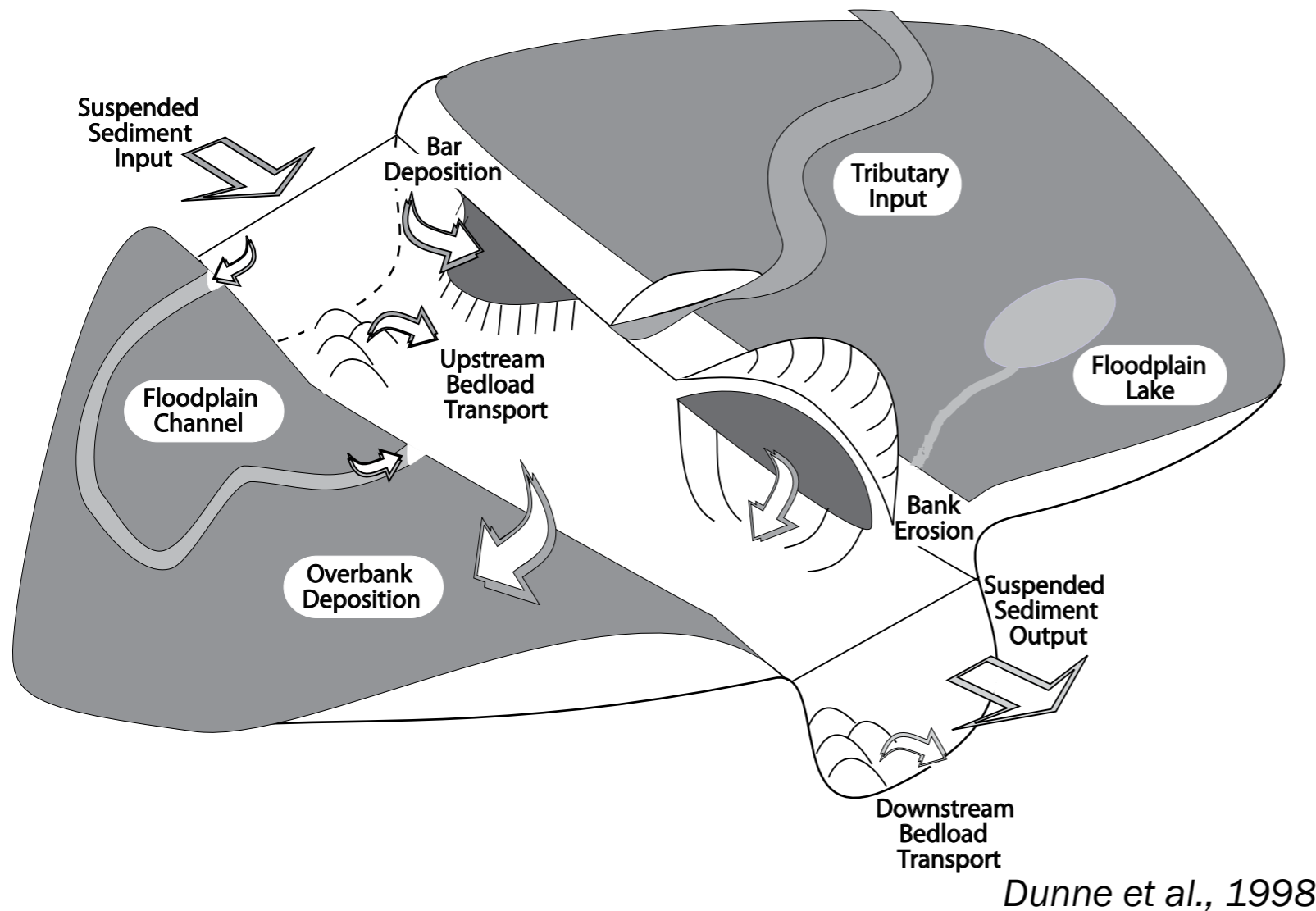


# Which sedimentary processes active in the upper river apply to the tidal river?



“The annual sediment exchanges between the channel and the flood plain ... are larger than the annual channel transport through the reach...

300–400 Mt/yr are deposited in a delta plain downstream of Óbidos.”

*Dunne et al., 1998*

*What are the timescales over which these processes act in the tidal river?*

# We investigated sediment-transport processes in several tidal floodplain channels.



**AQD1**



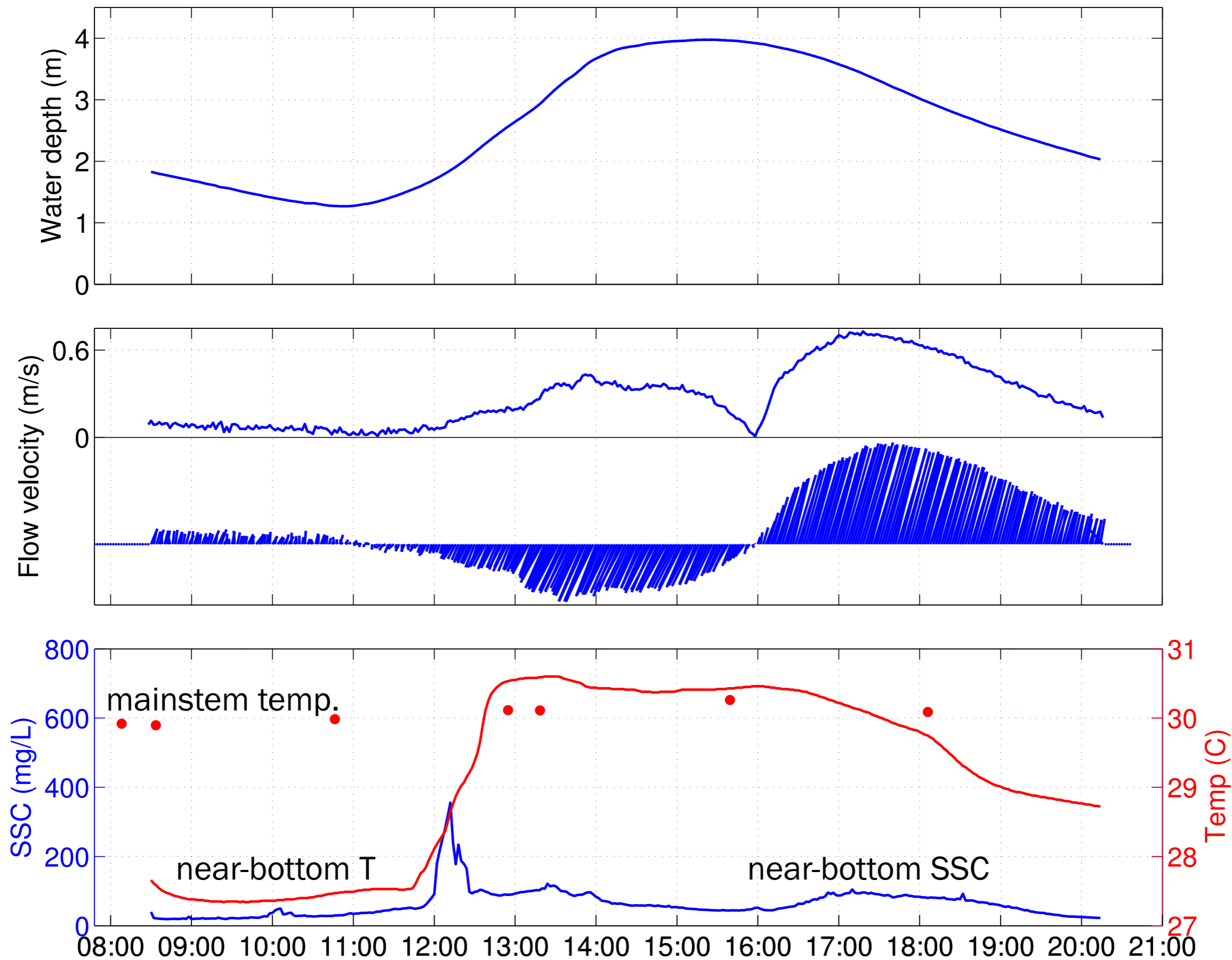
**AQD2**



**AQD4**



# The AQD4 time series shows characteristics of all observed tidal channels.



# Thermal stratification between tidal-channel water and main-stem water may initiate frontal convergence and sediment trapping.

