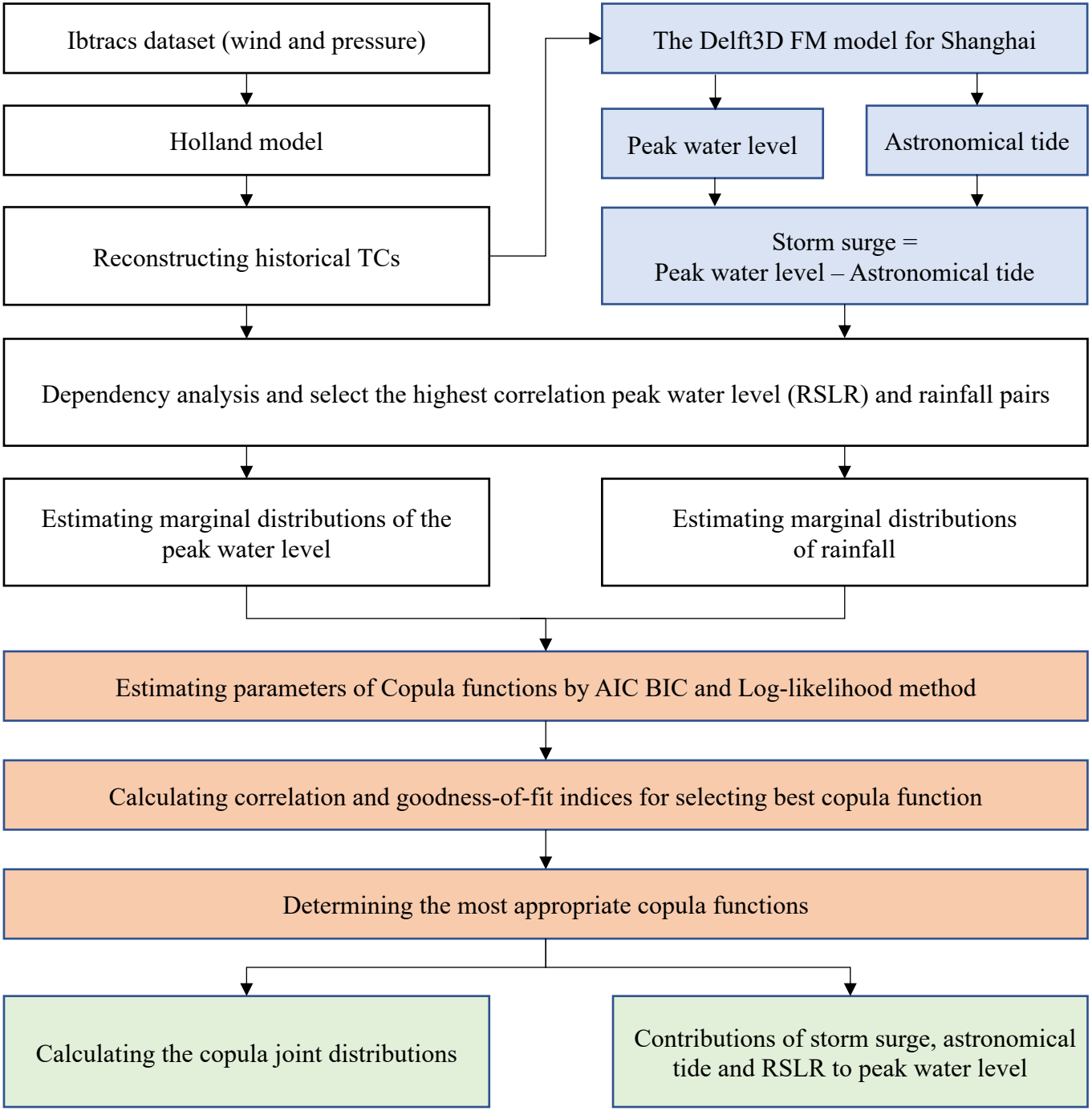
Ibtracs dataset (wind and pressure)
Holland model
Reconstructing historical TCs
The Delft3D FM model for Shanghai
Peak water level
Astronomical tide
Storm surge =
Peak water level – Astronomical tide
Dependency analysis and select the highest correlation peak water level (RSLR) and rainfall pairs
Estimating marginal distributions of the peak water level
Estimating marginal distributions of rainfall
Estimating parameters of Copula functions by AIC BIC and Log-likelihood method
Calculating correlation and goodness-of-fit indices for selecting best copula function
Determining the most appropriate copula functions
Calculating the copula joint distributions
Contributions of storm surge, astronomical tide and RSLR to peak water level