

Class 10 – Coastal flow simulation with DELFT.

Reading: Delft FLOW User's Manual.

- a. Lab – 2-D DELFT model of Tokyo Bay. Friction, boundary conditions, wind, structures, bathymetry.
- b. Model calibration with flow depth, speed, and inundation extent measurements.
- c. Design project 2 – Use DELFT to do 1 of the following projects:
 - Assess the potential for in-stream tidal power anywhere around Japan. Also, design structures that change the flow in such a way as to make tidal power more feasible. In such a case, please discuss the effects of these structures on shipping and on the environment. Using DELFT results, make maps of potential power that can be harnessed.
 - Assess the flood threat from either tsunami OR storm surge (高潮) anywhere around Japan. Use DELFT to design structures that can reduce damage from these disasters. Make maps of flood depth and maximum flood speed both with and without the structures, to determine the effectiveness of the structures. Discuss problems the structures might cause.