

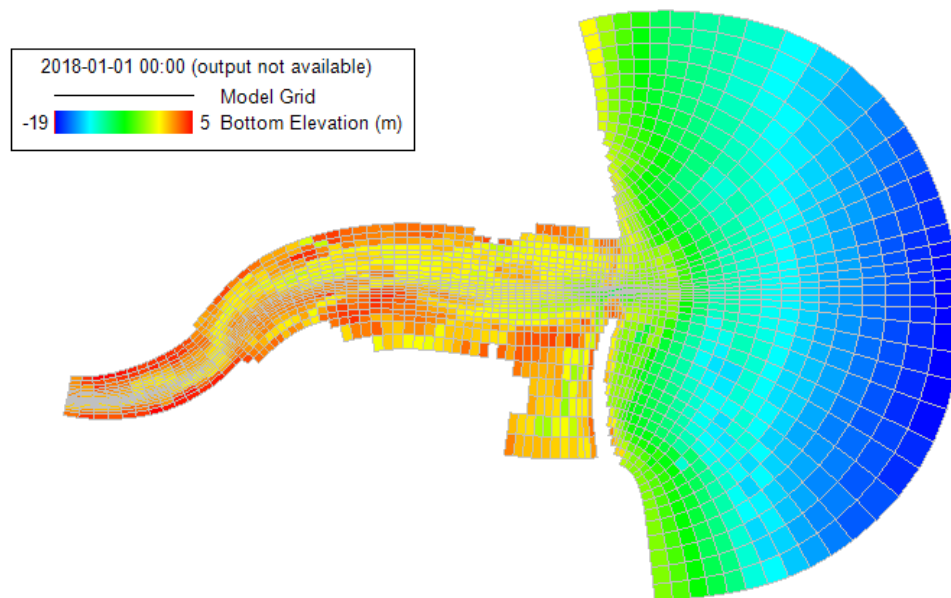
Read Me:

**Model Name:** DM-04\_Tra\_Khuc\_SedTrans\_Example

**Objective:** Use EFDC+ Explorer (EE) and EFDC+ to simulate hydrodynamics and sediment transport in the Tra Khuc Estuary, Vietnam, using two different sediment sub-models.

**Model Grid:** 2,204 horizontal grid cells, 5 vertical layers in water column. Original Sediment model has 4 layers in sediment bed, and the SEDZLJ model has 7 layers in the sediment bed.

### EFDC+ Demonstration



278981.21, 1679077.69

**Figure 1 Model Domain of DM-04\_Tra\_Khuc\_SedTrans.**

**Folder Structure:**

**Data:** This folder contains data that can be used with the model. These data can be measured data or output from model or derived from analytical equations.

**Models:** EFDC models that can be loaded in EE to pre- and post-process.

- Original Sediment Model: This is an original sediment model
- SEDZLJ Model: This is SEDZLJ sediment model

**Grid:** This folder contains grid for building the model

- Tra\_Khuc.cvl: CVL grid format, EE uses this grid type for building model
- Tra\_Khuc.kml: This file can be opened with Google Earth

**Maps-Images:** This folder contains the maps / images of the study area. The formats of the maps / images can be \*.geo (geo-referenced file), \*.jgw, \*.jpg etc.

- Tra\_Khuc.jgw
- Tra\_Khuc.jpg

**Test\_record file:** This file is just a record file that informs which EFDC+ executable was used to run the model.

**Modules Activated:** Hydrodynamics, salinity and sediment (Original EFDC sub-model and SEDZLJ sub-model for different versions of the model).

**Description:** This model is designed to demonstrate salinity and sediment transport in a coastal model. A sediment time series from the upstream boundary (river) has been configured, while a constant salinity has been configured for the open boundary (ocean).

**Disclaimer:** The model is provided to our users to demonstrate that EFDC\_Explorer and EFDC+ can be used to better understand how to build this kind of model. The model is running as expected; however, shouldn't be considered final as the model can be modified / refined to obtain improved results.

**Files in Data Folder:****Bathymetry**

- Bathymetry.dat
- Domain.p2d

**Boundaries**

- BC\_Inflow.dat
- BC\_Water Level.dat
- IC\_Bot Roughness.dat
- IC\_Salinity.dat
- IC\_WSEL.dat
- River\_Cohesives.dat

- River\_Non-Cohesives.dat
- SedCores\_Location.dat
- Sediment Settings.xlsx
- Tra\_Khuc\_Harmonic Constant.dat
- Tra\_Khuc\_Sed\_Cores.dat
- TS\_Cohesive sediment.dat
- TS\_Non-Cohesive sediment.dat
- Winds.dat

#### Outline

- Center Line.p2d
- LPT\_Region01.p2d
- LPT\_Region02.p2d

#### Model Result:

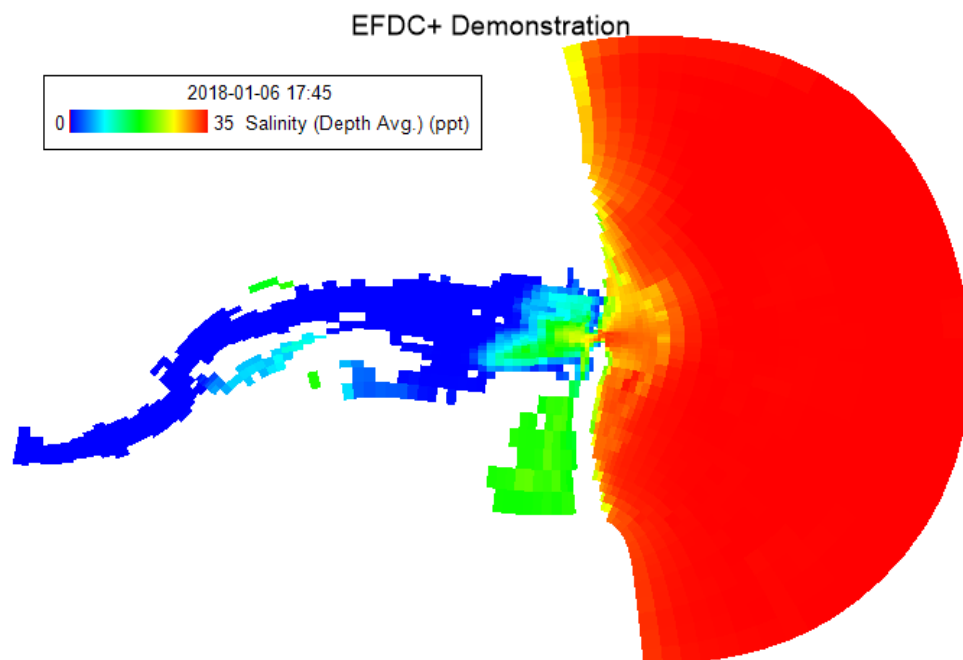


Figure 2 2DH view of salinity from DM-04\_Tra\_Khuc

EFDC+ Demonstration

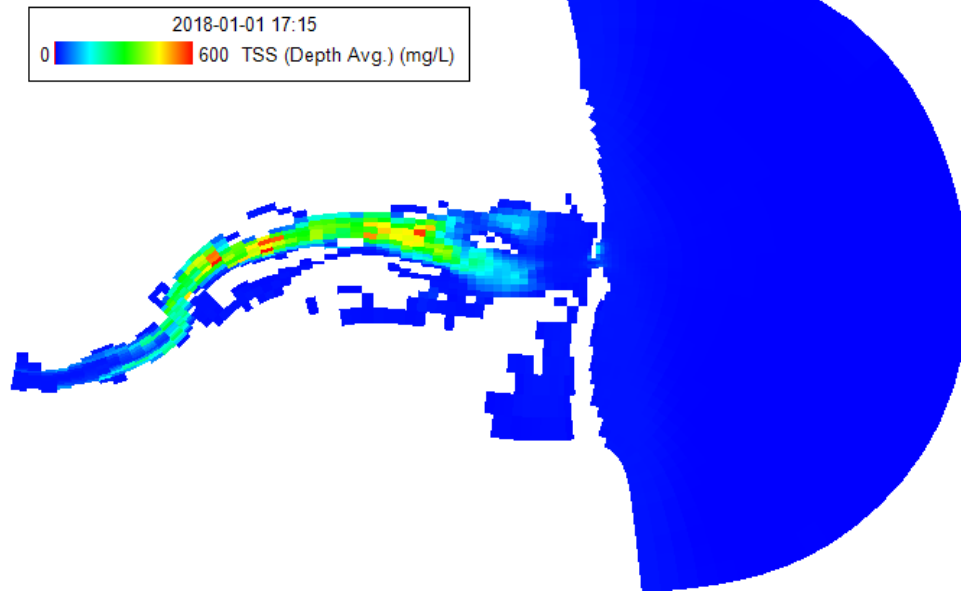


Figure 3 2DH view of Total Suspended Sediment from DM-04\_Tra\_Khuc