

Coupled Coastal, Estuarine and River Modeling

Research efforts are underway to couple overland flow and river runoff hydrology models to coastal ocean and estuarine and riverine models. Coupling will take place within the Earth System Modeling Framework (ESMF). Questions to be addressed include what resolution, frequency and spatial locations are optimal for the hydrology-ocean model coupling. The goal is to improve forecasts of freshwater-driven events in the coastal ocean environment. As the coastal ocean models are pushed into the land-sea margin, a need arises for implementation of a robust, efficient, two-way coupling methodology for nested coastal and estuarine models at high resolution in near-coastal regions. Experience with ESMF, WRF-Hydro and/or structured coastal ocean models is desirable. Strong communication skills both written and oral, an ability to take initiative, and work in a team environment are essential.