Readme:

The basis of this modeling system is the Princeton Ocean Model (POM). POM is a sigma coordinate, free surface, primitive equation ocean model which includes a turbulence sub-model. It was initially developed in the late 1970's and 1980's by Alan Blumberg and George Mellor with subsequent contributions from others. The model has been used for modeling of estuaries, coastal regions and open oceans.

This version of POM is called POM-rain.

The version has been enhanced to include generalized open boundary conditions, tracers, better bottom shear stresses through a submodel for bottom boundary layer physics, surface wave models, robust wetting and drying, obstruction grids (thin dams), upland ephemeral river discharges and diffusers. Multiple restart file options for operational oceanography use have been coded. A fast wind-wave growth and dissipation model based on Donelan's GLERL code modified to accept open boundary conditions, a wave breaking limit, bottom dissipation, improved wave dispersion equation for shallow water is part of the system. Several options for surface boundary conditions are available, including Taylor - Yeland with explicit wave steepness in a coupled mode, explicit air density calculation, etc.
Manning's n formulation for bottom friction has been implemented in the stand alone 2d (external mode) option, and dual water level plus velocity boundary conditions. Automated treatment of corner open boundaries is included, and linearized 2d BCs for robust clamped water level BC forcing in small domains. Several other treatments of BCs too, such as partially clamped, Blumberg radiation, etc. The latest upgrade has been to introduce spatially variable volumetric precipitation and evaporation physics, hence the code name POM-rain.

The code has been reconfigured to be easily ported to almost any computer system, from PCs to workstations to super mainframes to the cloud. Model performance has been evaluated by appealing to a large series of simple test cases designed to isolate specific processes and by application of the model to many real-world situations.

A new user can take advantage of an existing manual to readily prepare the files necessary to run the model. Versions of the manual can be found online via google. One version is:
http://www.academia.edu/34828780/A_Primer_for_ECOMSED_Version_1.3_Users_Manual

The POM-rain developers apologize that the manual is not up to date. It can be expected that a more complete manual will be forthcoming.