

Computational Marine Ecological Modelling report: NPD model

This report should document the NPD model that you have developed during the first half of the course. The report should contain:

1. Description of the governing equations and the different terms in the equations, together with an illustration of state variables
2. Description of the parameters and their units
3. Description of the numerical scheme including boundary conditions
4. Show that the solution is converged and independent of the grid size.
5. Description (with suitable figures) of the steady-state solutions of the model.
6. Discussion of the factors limiting phytoplankton growth
7. A sensitivity analysis of selected parameters entering the model, with interpretation of why a change in the parameters leads to the observed effects
8. A description of the seasonal succession of plankton
9. Matlab code on GitHub

The report should be in the form of a pdf document.