**Figure 11:**

Long-term (duration of simulation) average simulated concentrations of: (a) Dinoflagellates ($log_{10}$(mg dinoflagellate carbon $m^{-3}$)) under scenario NF; and $log_{10}$(dinoflagellate carbon concentration-ratio relative to this default) for alternative scenarios: (b) scenario 0; (c) scenario 1 with default mussel excretion, (d) scenario 1 with minimal mussel DIN excretion. For ease of reference: $log_{10}(100)=2$, $log_{10}(0.01)=-2$, $log_{10}(1.585)=0.2$, $log_{10}(0.631)=-0.2$ (approximately).

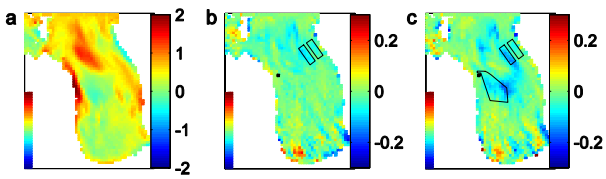
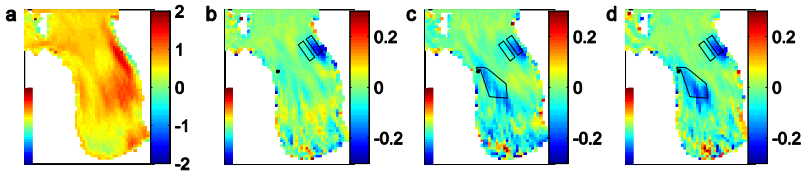
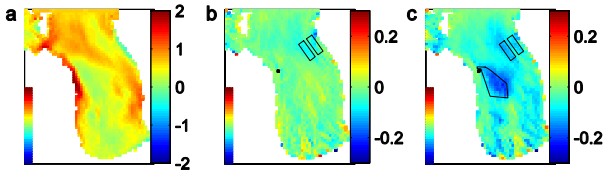
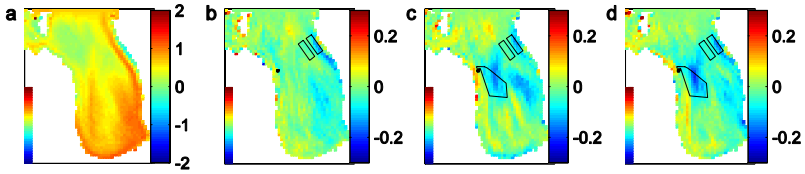
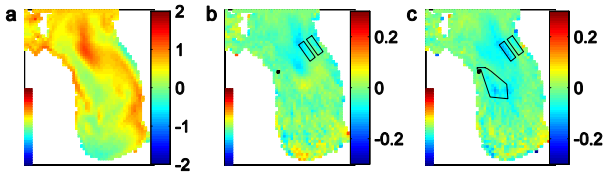
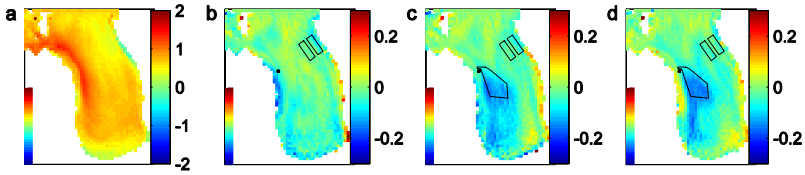
| Environmental conditions | Time-averaged results |
|---|---|
| September 1999 |   |
| March 2000 |   |
| Spring, winds prevailing from ENE |   |
| Summer, winds prevailing from ENE |   |
| Spring, winds prevailing from WSW |   |
| Summer, winds prevailing from WSW |   |

**Figure 12:**

Time-series of domain wide phytoplankton abundance within the model domain. Left-to-right, the columns correspond to diatoms, phytoflagellates and dinoflagellates. Top-to-bottom, the rows correspond to September 1999, March 2000, spring ENE winds, summer ENE winds, spring WSW winds and summer WSW winds. The colours denote differing scenarios: reds scenario NF; green scenario 0; blue scenario 1; summer simulations only – pink: scenario NF, initial & boundary condition DIN=10 mg N $m^{-3}$ (*cf* 1 mg N $m^{-3}$). In the cases of diatoms and dinoflagellates, the 'saw-tooth' pattern is dominated by the diurnal cycle of photosynthesis. In the case of dinoflagellates (which grow much more slowly), the tidal import/export cycle is often dominant.